EUROPEAN UNIVERSITY INSTITUTE

Department of Political and Social Sciences

Individual Educational Decisions:

A Study of the Low Levels of Educational Attainment in Italy

by

Cristina Iannelli

Thesis submitted for assessment with a view to obtaining the Degree of Doctor of the European University Institute

Florence
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Examining jury:

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Florence
April 2000

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ABSTRACT

Italy is one of the OECD countries with the lowest levels of educational attainment. This dissertation examines the reasons for this situation through the analysis of the main factors affecting individual educational decisions. Two main approaches are considered: the Structuralist and the Rational Choice Theory. The first emphasises the fundamental role played by external factors, that is family background, the educational system and the labour market, in determining individual educational allocation; the second explains the distribution of educational credentials as the result of individuals' rational evaluation process of the costs and benefits associated to different educational choices. Based on this theoretical framework four main hypotheses are formulated and tested. The first two refer to the constraining effect of individuals' family background, of tracking in education and of different regional economic development; the other two refer to the occupational benefits an individual gains from reaching different educational qualifications and to subjective expectations of educational success. Linear regression and logit models are the main tools used to analyse the data from the 1985 Italian Mobility Survey. The results indicate that individuals' social class of origin, the tracking system and labour market prospects are very important factors in explaining the low levels of educational attainment in Italy. Gender and regional differences do not emerge as having a significant role in the story. The conclusions highlight that two main elements seem to differentiate Italy from the other countries: the selective effect of tracking which reduces the attainment rates at both upper secondary and tertiary level; and the occupational returns to education which do not give a clear signal about the benefits of investing in education.

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INTRODUCTION

In comparison with other OECD countries Italy has a low level of educational attainment. This thesis analyses the reasons for the deficit. The main purpose is to discover the factors which affect the Italians' educational decisions, discouraging the majority of the population from reaching higher educational levels.

The increase in the levels of educational attainment over time is a trend common to all OECD countries. Modern developed societies have been witness to a general expansion of education which features two aspects: the realisation of "mass" education, and of higher levels of education. Almost 100% of people attend compulsory schooling and a large proportion of them enter high school, obtaining a diploma. The latest available OECD data (1997) show that Italy is one of the countries with the lowest levels of educational attainment. It is followed only by Luxembourg, Spain, Portugal and Turkey. Moreover, even if in Italy, as in the other OECD countries, the younger generations obtain more education than their elders, this educational expansion has not succeeded in offsetting the existing substantial disparities between Italy and the other countries.

It is from this assessment that the focus of this research project has arisen. Why has Italy one of the lowest levels of educational attainment among OECD countries? Why has Italy such a small number of upper secondary school graduates (*diplomati*) and university graduates (*laureati*)?

The low Italian educational attainment rates are surprising for two main reasons.

First, Italy is one of the most developed and highly industrialised countries in the world and it has an occupational structure that is similar to the other developed countries (see paragraph 3.2 of chapter 1). One of the factors considered important to the development of an industrialised economy is the availability of a well educated and highly skilled labour force.[1] The combination of high economic development

[1] The idea behind this assertion is that highly industrialised economies need for workers who are specialised, able to use advanced technologies and adaptable to changes (see the Thesis of Industrialism in chapter 2, paragraph 2.4).

and low educational attainments, which characterises Italy, makes the study of the reasons for the low investment in education particularly interesting. It can lend support to or place in doubt the validity of the existing theories about the role of education in modern societies.

Second, the Italian educational system is "formally" non-selective.[2] After the completion of compulsory schooling pupils are not forced to follow any specific track; they can choose to go to one of the various types of upper secondary school. Moreover, the Italian university is open to people graduating from academic schools as well as from technical, vocational or other tracks, provided that they hold the so-called maturity diploma.[3] In most universities there is no pre-selection based on academic tests; a compulsory attendance of university courses is often not required and fees are not very high.

Lastly, the study of the factors which influence the levels of educational attainment is related to the problem of equality of educational opportunities, which is still a greatly discussed topical problem. The unequal distribution of educational qualifications among men and women, social groups, and people living in different areas of the country, may account for the low national levels of educational attainment.

The present dissertation focuses only on the Italian case. However, in searching for the main factors which negatively affect Italian educational outcomes, reference will be made to the experience of the other OECD countries either through the quotation of the existing literature or the analysis of the official statistics.

The thesis is structured into 7 chapters. Chapter I focuses on the macro differences and commonalties in the education system and economy of Italy and the other OECD countries based on the OECD official statistics. It draws a general picture of the historical trends in educational attainment (both for the entire

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[2] The expression "formally" non-selective means that the system is apparently very open and no restrictions on the educational choices are imposed on students. However, the way in which it is organised and operates can hide informal forms of selection (see chapters 2 and 4).

[3] The diploma of maturity is gained after having passed a state examination which concludes the five-years of upper-secondary school (at around 18-19 years). In the case of some shorter tracks, such as vocational and teaching training schools, one or two supplementary years of study, again followed by the state maturity examination, are necessary to enter university.

population and for women) and participation rates in different upper secondary schools, and on the historical development of the Italian economy.

Chapter II states the theoretical framework on which all the empirical analysis is based. It presents two main theoretical approaches: (1) Structuralism and (2) Rational Choice Theory. These explain the distribution of educational credentials referring (1) to the influence of external constraining factors on individual educational opportunities and (2) to an individual rational evaluation of the costs and benefits associated with different educational choices. Within these two general approaches, some more specific theories are illustrated and discussed. From the analysis of these theoretical viewpoints four main hypotheses, which provide testable explanations for the low levels of educational attainment in Italy, are formulated.

Chapter III deals with the methodological choices made in the thesis. It presents the research design, the techniques of analysis and statistical models (logit and linear regression models) used in the three empirical chapters. Finally, it describes the data and the conceptualisation and operationalisation of the variables.

Chapter IV starts the empirical part of the thesis through the analysis of the effect of individual ascriptive factors on the likelihood of making different educational transitions. More specifically, the relationship between gender, social origin and place of residence and the likelihood of going on to upper secondary level and of choosing one of the different tracks is studied. The second part of the analysis deals with the effect of attending one of the various tracks on future educational outcomes.

Chapter V focuses on the occupational returns to education. "Marginal" and "total" returns are measured to study the additional returns that an individual gains in progressing from one educational level to the following one, and the total occupational benefits that he\she obtains from different educational qualifications. An exposition of the existing literature on the monetary returns to education and the likelihood of being employed or unemployed associated with different educational qualifications is also included in the chapter. The last part deals with subjective expectations of school success. These expectations are assumed to vary among

social classes and to be influenced by the academic experience of those who come from the same social background. Thus, the proportions of people from various social classes who succeeded in making the higher educational transitions are measured.

Chapter VI is the last empirical chapter and deals with the distribution of educational attainment in different areas of the country. Overcoming the simplistic bipartition North-South and using a division in three areas of the country (North-west, North-east and Centre, and South), the likelihood of making different educational transitions is analysed in the light of territorial differences.

Chapter VII is the concluding chapter in which the theories and main findings are summarised and discussed. It tries to offer a general understanding of the processes in action in the Italian educational system and labour market which affect the national levels of educational attainment. The factors studied in chapters IV, V and VI which emerged as important in the explanation of the Italian case are re-analysed in a comparative perspective. The aim is to discover whether these factors are operative in other developed countries and, in case they are, why they do not lead to the same outcomes. Finally, this chapter contains some considerations about the policy implications of the results presented in the dissertation, trying to make a contribution to the actual debate on the educational reforms in Italy.

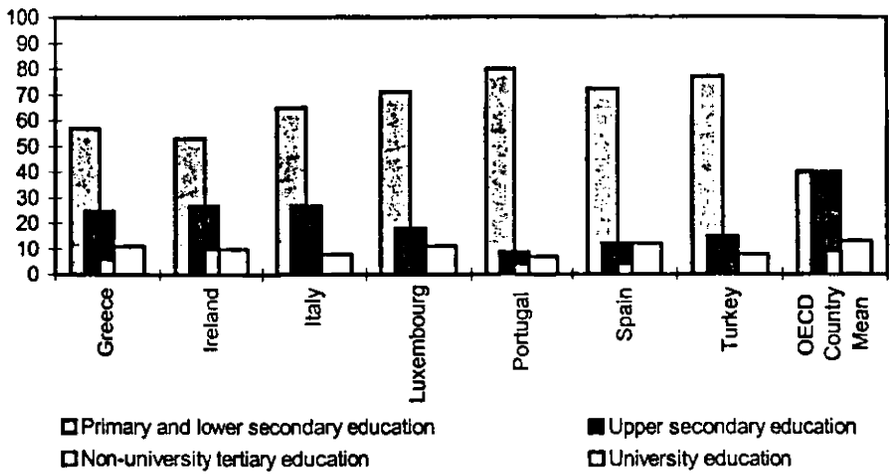
CHAPTER I

A COMPARISON BETWEEN ITALY AND THE OTHER OECD COUNTRIES

1. Introduction

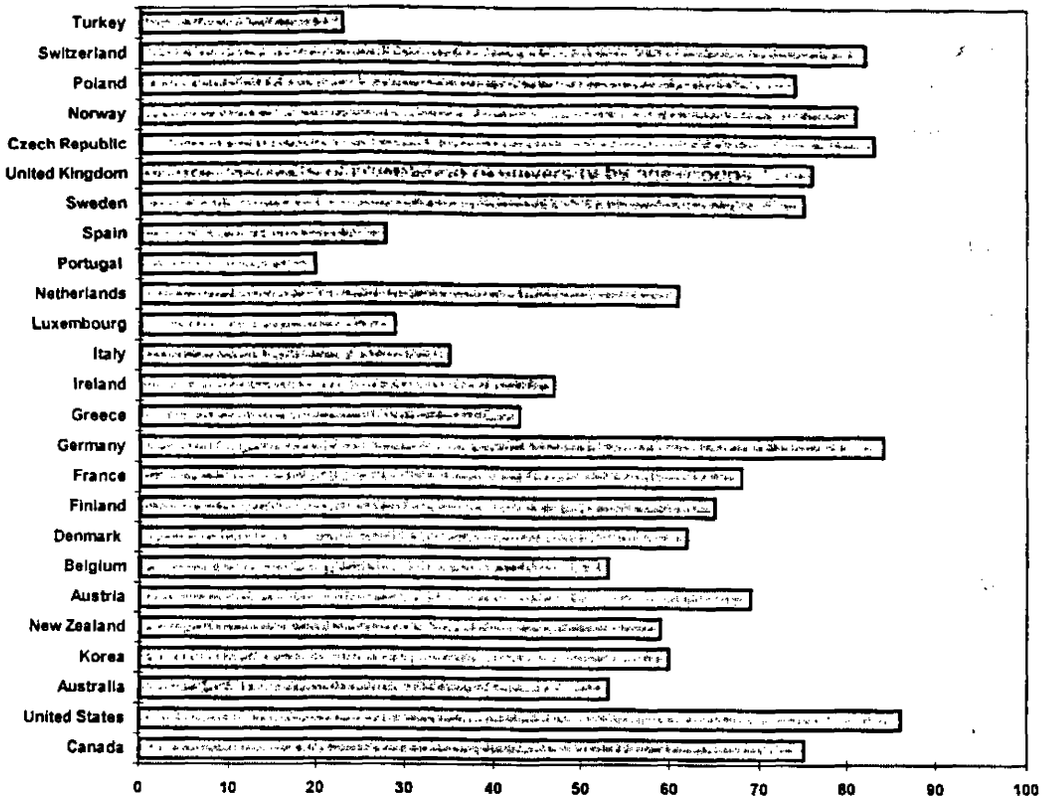
Great country differences characterise the educational attainment rates of the OECD countries. In Greece, Ireland, Italy, Luxembourg, Portugal, Spain and Turkey the majority of the population aged between 25 and 64 years have only primary or lower secondary education (figure 1.1.), while in the other countries more than half of this population has reached at least an upper secondary education (figure 1.2.).[1] The extreme cases are well captured by Germany and United States, where more than five-sixths has reached at least upper secondary education, and Portugal and Turkey, where only one-fifth has reached this level (OECD, 1997).

Figure 1.1. Percentages of the population aged 25 to 64 by the highest completed level of education in selected OECD countries (year 1995).



[1] In Appendix 1 there are all the tables from which the figures presented in the dissertation are drawn.

Figure 1.2. Percentages of the population aged 25 to 64 who have completed at least upper secondary education (year 1995).



In Italy only 27% (versus 40% of OECD country mean) of the population aged between 25 and 64 has completed an upper secondary education, and 8% (versus 13% of OECD country mean) has had a university education (figure 1.1.). Italy is also at the lowest level of educational attainment when one considers younger age groups. Among the population aged between 25 and 34 only 49% has completed upper secondary education and 8% has completed tertiary education. While the related means of the OECD countries are respectively 71% and 23% (figures 1.3. and 1.4.).

Figure 1.3. Percentages of the population who have completed at least upper secondary education, by age groups - Italy and OECD Country Mean (year 1995).

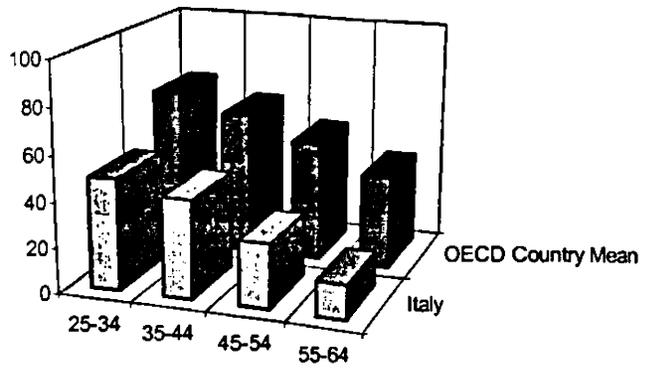
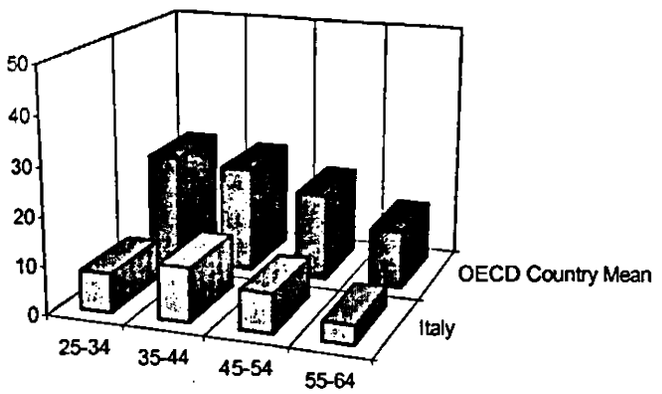


Figure 1.4. Percentages of the population who have completed tertiary education, by age groups - Italy and OECD Country Mean (year 1995).



It should be noted that the OECD data report the rates of graduation from tertiary education for different age groups without distinguishing between university and non-university education. This makes a comparison between Italy and the other OECD countries difficult and potentially misleading. In fact, the data on tertiary education related to Italy do not include the rates of non-university education (due to the low numbers of people attending non-university tertiary education) while in most OECD countries they do. Moreover, these data under estimates the rate of tertiary completion

of Italy because among those aged between 25 and 34 there is a number of people who are still at university and may gain their university degree in future. In Italy a large proportion of students stay at university longer than the normal duration of the course, as testified by the median age of university completion which is 26.8 (OECD, 1997).

More generally, it has to be taken into account that the educational attainment rates presented in the OECD statistics are defined according to the International Standard Classification of Education (ISCED).[2] Like many other categorisations which try to create comparable international indicators, ISCED often fails to accurately capture national features. This is because some educational programmes are not easily classifiable and national educational systems continuously evolve. Thus, comparability is not always achieved and, as it will emerge in the course of this dissertation, some data can lead to misleading comparisons between countries.

2. Historical trends in the educational attainment rates of the OECD countries.

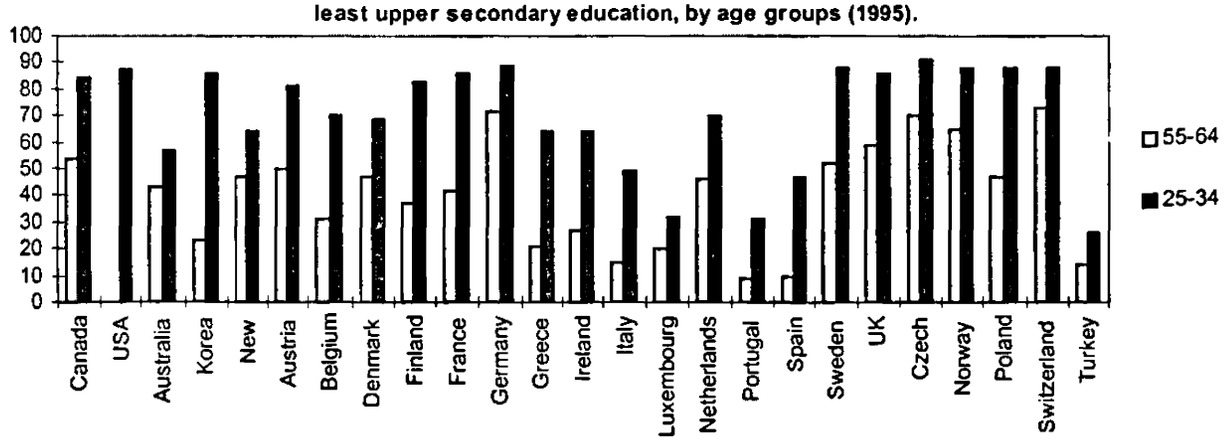
All OECD countries have experienced an expansion in education over time. The extent of this growth can be analysed only referring to the evolution of the educational attainment rates in different time periods. Unfortunately, it is not possible to have a continuous series of the rates of graduation from upper secondary school and university for the past decades. With the exception of the last years, no reliable international indicators were available and no comparison could be made between the educational attainment rates of different countries. A way to overcome this problem, trying to draw a picture of the changes which occurred, is to analyse the levels of educational

[2] ISCED focuses on the classification of educational programmes by level and field of education. It defines 7 educational levels: level 0 - Education preceding the first level; level 1 - Education at the first level (primary education); level 2 - Education at the second level, first stage; level 3 - Education at the second level, second stage; level 5 - Education at the third level, first stage, leading to an award not equivalent to a first university degree; level 6 - Education at the third level, first stage, leading to a first university degree or equivalent; and level 7 - Education at the third level, second stage leading to a post-graduate university degree or equivalent. Recently ISCED categories have been revised to improve the definitions and criteria used and to ensure a better comparability. All the information about ISCED can be found in the web pages of Unesco: www.unesco.org.

attainment of different age cohorts. Thus, from the OECD data which refer to different age groups we can have an indication of the completion rates in four time periods: the 1950s, 1960s, 1970s and 1980s.[3]

It is evident that there has been a large increase in the percentages of people completing upper secondary and university levels in all OECD countries. However, this increase has been more or less marked according to the various countries. Thus, comparing the youngest age group (25-34) with the oldest (55-64), we can say that between the 1950s and 1980s some countries like France and Finland have had an increase in the rates of people with at least upper secondary school of more than 40%. While others, such as Turkey, Luxembourg and Australia of less than 20% (figure 1.5.).[4] Italy is placed in between these two extremes with a growth of 34% in upper secondary school completion.

Figure 1.5. Percentage of the population, aged 25-34 and 55-64, who have completed at least upper secondary education, by age groups (1995).

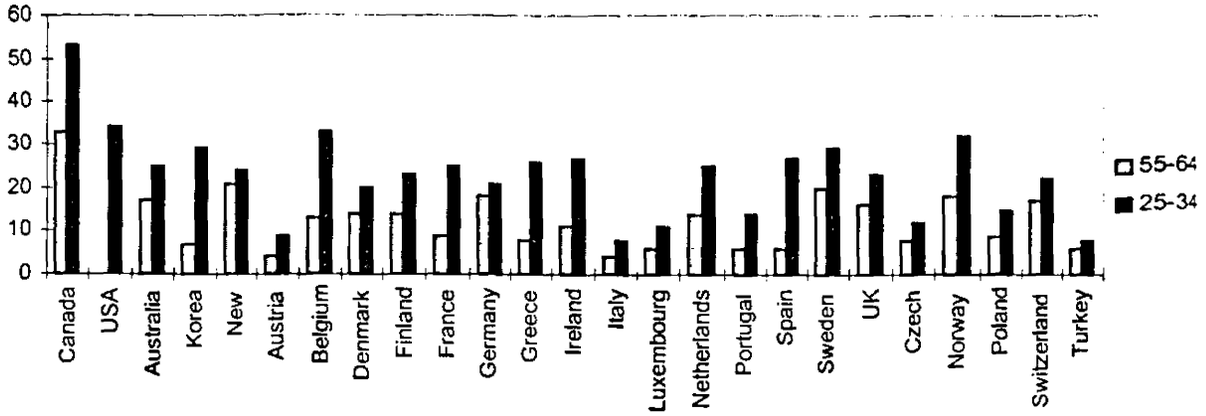


In the same time period, at tertiary level, the range of increase goes from 20-22% of Korea, Belgium, Canada and Spain to below 5% in Turkey, Germany, the Czech Republic and New Zealand (figure 1.6.).

[3] The four decades correspond to the years in which people in the four analysed age groups, 25-34, 35-44, 45-54 and 55-64, should have completed their upper secondary education and university level.

[4] It has to be noted that the lower rates of increase in upper secondary school completion in some countries are justified by the very high rates of educational attainment of the older age groups. Thus,

Figure 1.6. Percentage of the population, aged 25-34 and 55-64, who have completed tertiary education, by age groups (1995).



Italy shows the same low percentage of university graduates (8%) among those aged 25-34 and 45-54 (see figure 1.3.). As previously explained, this depends on the late completion of tertiary education. This explanation is also supported by the higher percentage of university graduates among the population aged between 35-44 (11%). However, even taking into account this reason, Italy does not seem to register a significant increase in the rates of university completion.

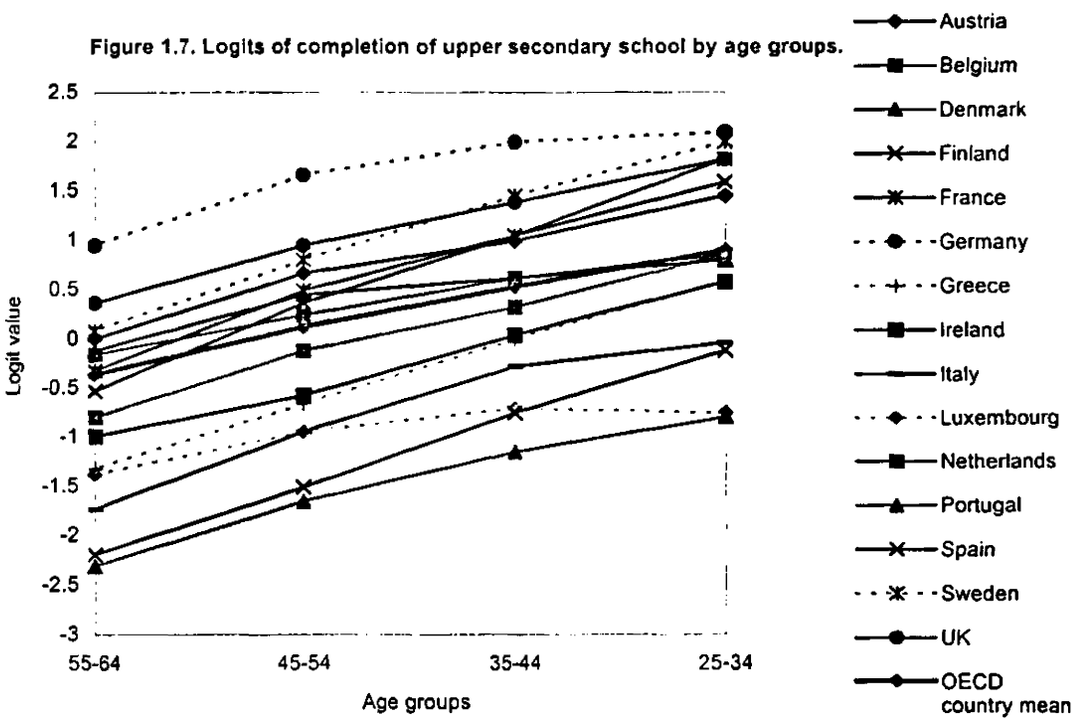
From these general descriptive statistics it emerges that school attainment changed at different rates from the older to the younger generation in different countries. Because percentages are constrained to the interval between 0% and 100% the comparison among countries fail to adjust for "floor" and "ceiling" effects. This means that looking at the country differences in the percentages of attainment we can make the mistake of regarding a variation of 5% in the rates of university completion in Austria (from 4% to 9%) in the same way as a variation of 5% in the rates of university completion in Switzerland (from 17% to 22%). Indeed, in the first case the percentage of university graduates more than doubled while in the second case the increase is much smaller, around one-third.

Germany has an increase of only 17% from the older generation to the youngest one because the starting rate of upper secondary completion was already very high (72%).

To have a better understanding of these country differences the logit values [5] of completion of upper secondary school and university are measured for each country. The logit values have the advantage of ranging between negative infinity ($-\infty$) and positive infinity ($+\infty$), so overcoming the problem of the "floor" and "ceiling" effects. "Because they 'stretch out' very high and low probabilities, logits are useful for making comparisons among proportions at differing levels" (Knoke and Bohrnstedt, 1994, p.335).

Figures 1.7. and 1.8. plot the logits of completion of upper secondary and university level of the four examined age groups focusing only on the European Union countries. The trends for these countries, even though they reveal a general increase in the chance of obtaining the higher educational qualifications, are very differentiated.

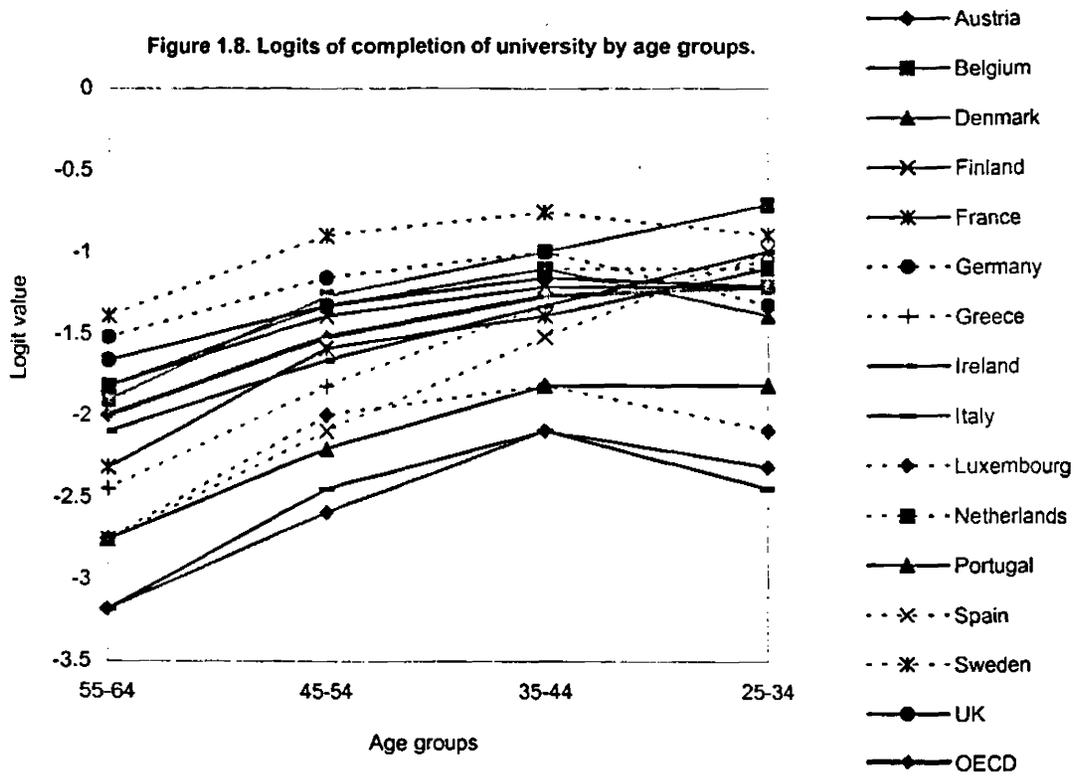
Figure 1.7. Logits of completion of upper secondary school by age groups.



[5] The logit is the log of the odds ratio which is expressed by the formula $L = \log\left(\frac{p}{1-p}\right)$. This is the measure used in most of my empirical research. For more explanation of the odds ratio and logit values see chapter 3 paragraph 3.2.

The increase in the log odds ratios of upper secondary completion are more marked in France, Finland, Spain, Sweden and Greece. At university level, they are more marked in Spain, Greece, France, Belgium and Ireland. [6]

Figure 1.8. Logits of completion of university by age groups.



There is a tendency of those countries which are at the bottom of the scale of educational attainment to narrow the gap with the other countries. This is certainly the case of Spain and Greece and to a lesser extent Italy and Portugal. The last available data (related to the year 1995) of graduation rates - that are measured dividing the number of upper secondary and university graduates by the population at the typical age of graduation (OECD, 1997) - confirm this tendency. Thus, in 1995, in Spain 73% of the population aged 16-18 has gained an upper secondary school qualification (against 47% of the population aged 25-34) and 14% of 23 years old has acquired a university

[6] The differences in the log odds ratios of upper secondary and tertiary completion between the oldest age group and the youngest one are presented in appendix 1, tab.1.3 (column 5) and tab.1.4. (column 5).

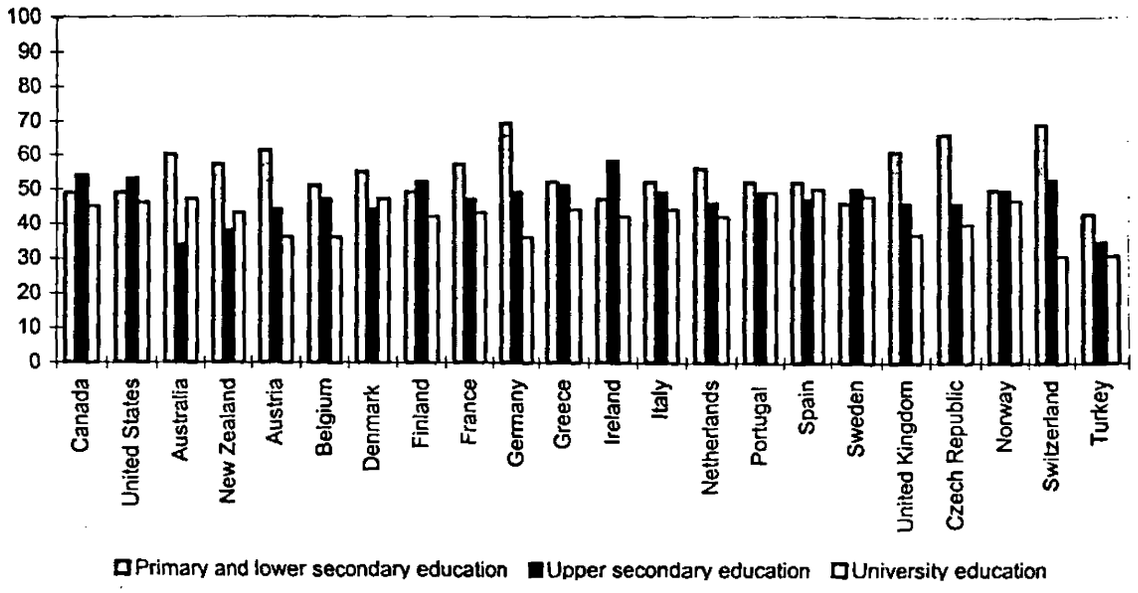
degree. In Italy the corresponding graduation rates are 67% and 11%. In spite of this increase, the Italian rate of upper secondary school completion still remains lower than the OECD country mean (80%). A more complex situation emerges in the case of tertiary education. The Italian lower rates of tertiary completion are due to the almost complete absence of alternatives to long university degree programs. Indeed, the rate of graduation from long university degree programs is today higher than the OECD country mean (11% versus 8%) even if countries like Germany (16%), the Netherlands (19%) and also Spain (14%), Greece (14%) and Portugal (13%) show percentages higher than Italy. Of course, these data have to be considered with some caution because of the late completion of university, mentioned above, which characterises Italy. On the other hand, graduates from short-university degree programs (1%) and non-university tertiary education (7%) are an exiguous minority of the young population.[7]

2.1 Gender differences

With regard to gender differences, in the greater part of OECD countries, and in Italy as well, the majority of people who completed only primary and lower secondary education were female (figure 1.9.). On the contrary, for the highest level of education (university) there is a striking male over-representation. In the year 1994, in some countries, like the Czech Republic, Switzerland, Austria and the United Kingdom, women represent more than 60% of the population aged between 25 and 64 who have only primary and lower secondary education (OECD, 1996). In other countries, like Ireland, Canada and the United States, more than 50% of those who have gained an upper secondary school diploma are women. In Italy, for the 25-64 age group the proportion of women, among those who completed the various educational levels, is 52% in primary and lower secondary education, 49% in upper secondary education and 44% in the university education. It is noteworthy that, in this case, Italy is very close to the mean of the other OECD countries.

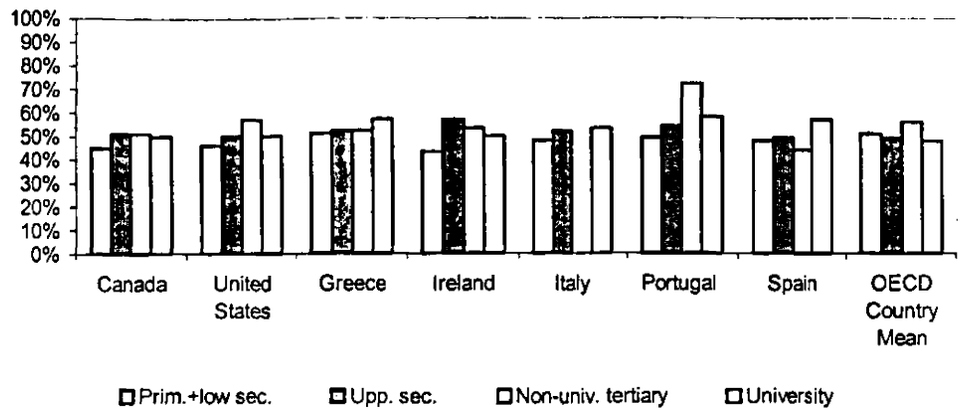
[7] For more details see chapter VII, paragraph 3.2.

Figure 1.9. Percentages of women in the population aged 25 to 64 by the highest completed level of education (year 1994).



The data on different age groups suggest that there is a trend towards greater equality in the attainment of men and women in most OECD countries. As for the total population, the data on female educational attainment show an increase in the educational level of younger generations (OECD, 1996, table A2.3). In fact, over-representation at primary and lower secondary levels is more pronounced among the older age groups than the younger ones, and the same can be said about male over-representation at upper secondary and university level. Indeed, some countries in the 25 to 34 age group have higher graduation rates for females in upper secondary and tertiary education. Among them the North American countries, Ireland, Greece, Portugal and Italy (figure 1.10.). Thus, even in Southern European countries gender differences tend to disappear or to be in favour of women (with the exception of Turkey).

Figure 1.10. Percentage of women in the population aged 25-34 by the highest completed level of education, in selected OECD countries (1994).



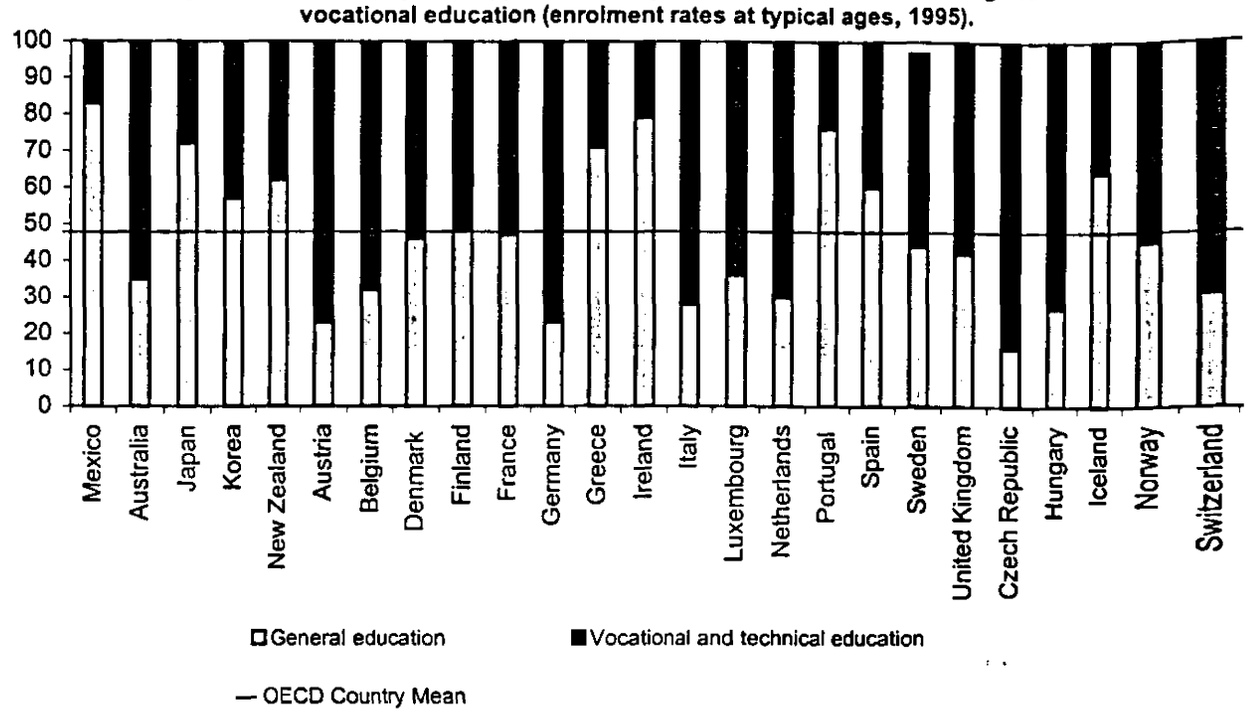
Nowadays, among teenagers and young people the graduation rates of women are higher than those of men in the majority of the OECD countries (OECD, 1997).

2.2 Vocational or general education?

In the majority of the OECD countries a larger number of upper secondary students attend vocational education institutions or participate in apprenticeship than general education institutions (figure 1.11.). In 1995 among European Community countries only Greece, Ireland, Portugal and Spain show a participation percentage lower than 50% for all upper secondary students in vocational schools. While for Germany, Austria and Italy this rate is above 70% (OECD, 1997).[8] In Italy 28% of all upper secondary pupils are enrolled in general educational tracks while 72% of them

[8] Also in this case some warnings should be made regarding the accuracy of the OECD statistics. For example the literature on the British educational system usually emphasises the predominant general content of school programmes in the UK. While according to the OECD statistics the majority of British students who continue in upper secondary education (58%) enrol in vocational programmes. The explanation seems to be that these statistics are "inflated by large numbers of adults taking one or two courses at the upper secondary level who are much older than the typical age" (OECD, 1997 p. 372).

Figure 1.11. Percentages of upper secondary school students enrolled in general and vocational education (enrolment rates at typical ages, 1995).



However, differences among nations in educational systems and in the link between the school system and the labour market are very wide. In Germany, for example, the educational system is highly stratified and selective. German pupils are, at the age of 10, after elementary school, placed in one of the subsequent tracks which are socially selective and influential on the future occupational destinations.

In particular, vocational education and apprenticeship play a very important role in the occupational stratification process. In Germany work placement is strongly influenced by job-related training and has relatively little to do with general education (Maurice, Sellier and Silvestre, 1986). In fact, 75% of all workers have a basic apprenticeship certificate and white-collar workers frequently have some clerical or intermediate technical certificate. This vocational training often takes place under the

control of employers, thus realising a dual system which reinforces the highly allocative significance of job-training.

Even if the percentage of students who attend vocational and technical tracks is also very high, in Italy there is not such a strong linkage between vocational education and the labour market. The *Rapporto Isfol* (1992) denounced the lack of a policy for vocational training and for a guidance system focusing on young people, the rare forms of integration among the different cycles of education, and the lack of a interlinking relation between the regional vocational training system and the national one. The Italian educational system seems to have always neglected the needs of the economy and firms in terms of a skilled work-force. Even the same contents of the vocational and technical programs are often general and not really oriented towards acquiring specialist skills. On the other hand, entrepreneurs in Italy (in contrast to other countries) are not involved in organising vocational courses. They do not want to face the costs of these courses and prefer to hire people to learn a job directly with the experience gained in the work place.

In all member states of the European Union, except the United Kingdom, there are more girls than boys in general education and more boys in vocational education. However, this difference between the sexes is also diminishing. In Italy the percentage of girls attending technical schools has increased, in particular in the *Istituto Commerciale* (Institute for Accounting Studies). Thus, demonstrating that these schools are no longer "male" oriented, as they were traditionally considered to be, but that they are the most widely chosen tracks by both sexes.

3. Comparing the economic development in Italy and in the other G7 countries

Educational attainment is considered an important factor in determining economic development. Well educated and trained people represent driving forces towards an expansion of scientific knowledge and economic productivity. In this perspective Italy is a puzzling case because it has an economic structure which is

similar to the most developed and industrialised countries,[1] but educational attainment rates much lower than those of these countries.

The reference to the Italian economy and its participation in the G7 requires some brief notes of clarification about the historical time scale and the modalities of the development of the industrialisation process in Italy. Then, a comparative description of the main economic indicators (GDP per head and employment rates by sector), which rank Italy among the most developed countries, is presented.

3.1 The industrialisation process in Italy

In Italy the years of the great industrial development began in 1951. It was at this point that Italy radically transformed from being an "agricultural society" to an "industrial society" (Bagnasco, 1977). Later than other European countries (such as Great Britain and Germany) but with a more rapid and consistent growth, the industrial development of the '50s and '60s managed to reduce the initial economic gap which separated Italy from most of the other more advanced economies of Europe. Between 1956 and 1963 this unequalled economic expansion led to talk of an "economic miracle" (Castronovo, 1980). It was characterised by a growth of the productive apparatus of industry, by the opening of Italy up to foreign trade (favoured by the entry of Italy into the EEC in 1957) and by the process of urbanisation (Bagnasco, 1977).

In spite of this general economic development, the differences existing between the South and North of Italy persisted. Bagnasco (1977) underlines the fact that the economic growth was sustained in the places in which the industrial structure was already situated as a past inheritance and that the underdevelopment of the South was functional in the process of economic development. The South represented a market in which the products of the Northern industries could be sold, and it also provided a huge "reservoir" of manual labour.

[1] When I speak about the most industrialised countries the reference is to the G7, that is the United States, Japan, Germany, France, Italy, the United Kingdom and Canada.

In the 1970s the traditional image of the "two Italies" was replaced by a more complex image of the "three Italies" (Bagnasco, 1977), i.e. the binomial North-South was no longer considered sufficient to explain the differentiated economic situation of the country. The small and middle firms of North-east and Centre of Italy (industrial district) were recognised as crucially important components of the national economy (Castronovo, 1980). In the '60s they already represented a consistent part of the manufacturing industry but it was in the '70s and '80s that their weight increased remarkably, counterbalancing the crisis of the larger industries of the North-west (industrial triangle). Their high levels of flexibility and adaptation permitted them to better correspond to the changing demands of the market, while the Fordist way of production could not. Italy completed its transformation into a modern industrialised country with all these internal differences. The employment structure of the 1990s - with 32% of civilian employment working in industry and 60% in services (OECD, 1997)[2] - testifies that Italy is in line with the most highly developed and industrialised countries.

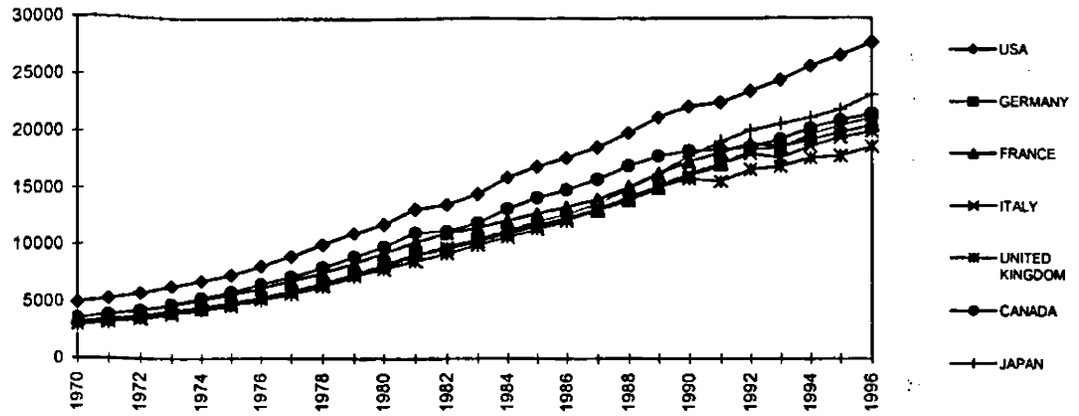
3.2 GDP and employment and unemployment rates

The historical statistics on Gross Domestic Product per head and employment structure in different economic sectors clearly show the alignment of the Italian economy to the most developed economies.

A substantial increase in GDP per head, which is an indicator of the wealth of the countries, from the 1970s to the 1990s is a common trend to all the G7 countries (figure 1.12.). GDP per head passes from a range of 2,874-4,920 US dollars in 1970 to a range of 18,636-27,821 US dollars in 1996. The value for Italy is 19,974 US dollars.

[2] The country mean for the G7 is 29,2% of workers in industry and 66,5% in services.

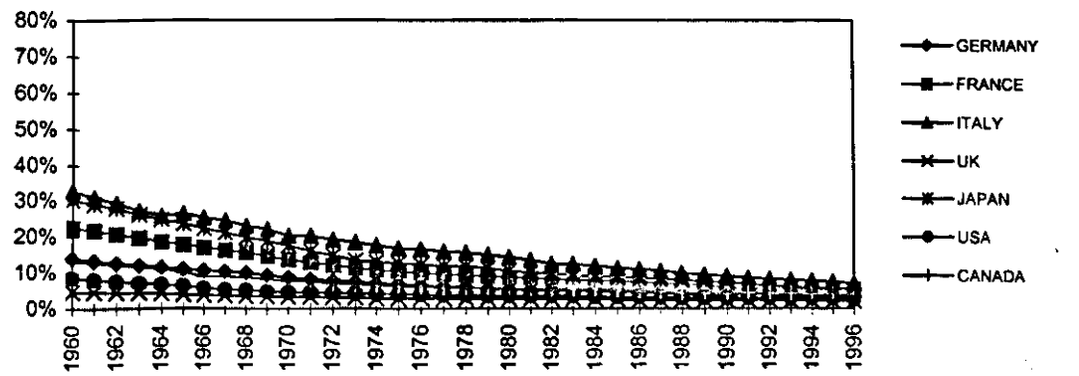
Figure 1.12. Gross Domestic Product per Head in US $ - Current Prices and Current PPPs.



The employment structure in Italy has also followed common trends: a decline in the percentage of people working in agriculture; an increase, followed in the latest decades by a decline, in the percentage of employees in industry, and a continuous increase in the employment rates of the service sector.

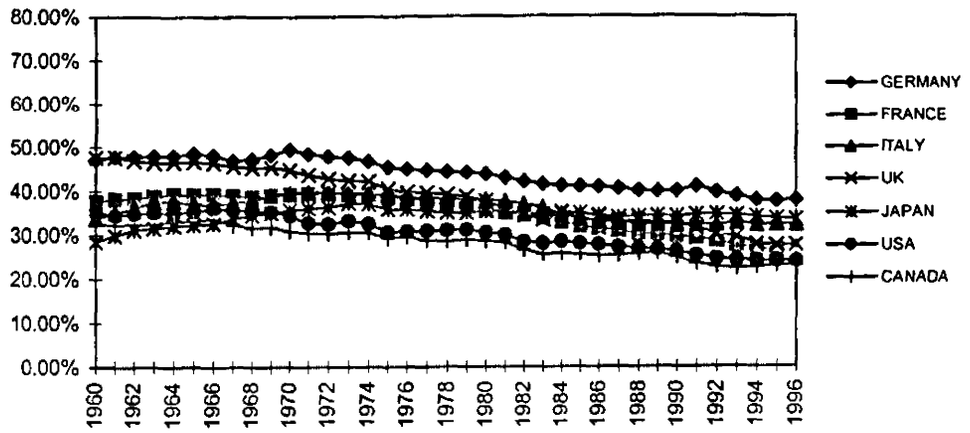
Thus, the percentage of workers employed in agriculture dropped dramatically from 33% in 1960 (which is very high percentage if compared to 5% in the UK and 8% in the US but also 14% of Germany in the same year) to 7% in 1996 (figure 1.13.). These data attest the strong agricultural nature of the economy which still characterised Italy in the 1960s and 1970s but also the large changes which have occurred in the last two decades.

Figure 1.13. Employment rate in agriculture.



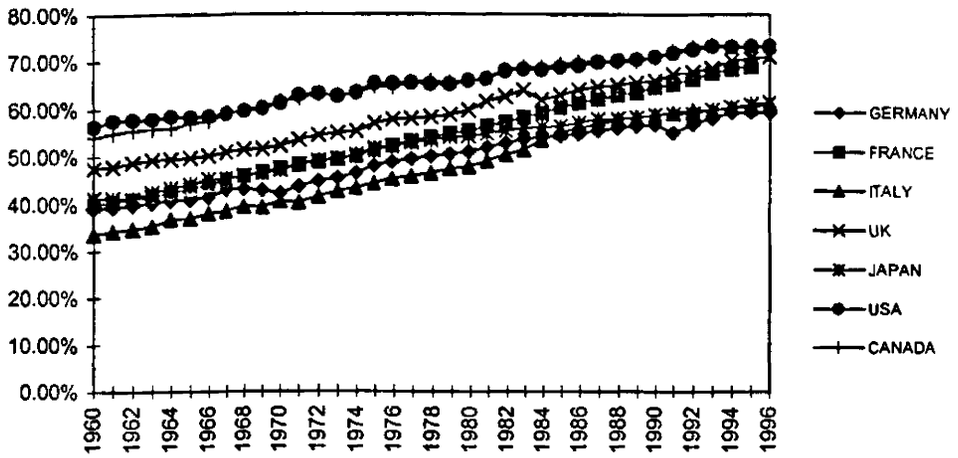
The percentage of industrial employees grows until the 1970s reaching 40% of the total employed population and slowly decreases from that time onwards (figure 1.14.). Only in the UK this decline was already occurring in the 1960s due to its earlier industrial development, while in all the other countries it has started later. In 1990s, the percentage of workers employed in the industrial sector in Italy has stabilised at around 32%, ranking Italy in the middle (more close to the top than to the bottom of the scale) between the Northern American countries (23%) and Germany (38%).

Figure 1.14. Employment rate in industry.



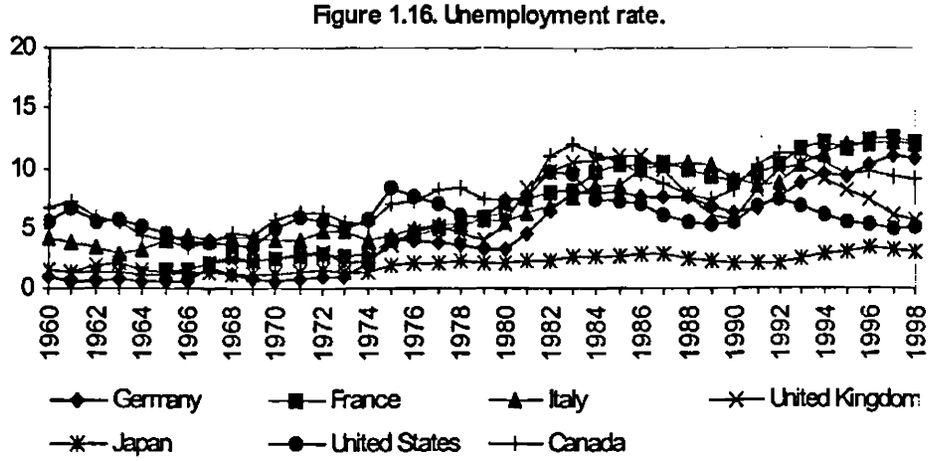
The declining percentage of people working in agriculture and industry has been counterbalanced by the increase in the percentage of workers in the service sector (figure 1.15.). The data show a consistent increase over time in the percentage of employees in services. From the 1980s it employed the majority of civilian workers.

Figure 1.15. Employment rate in services.



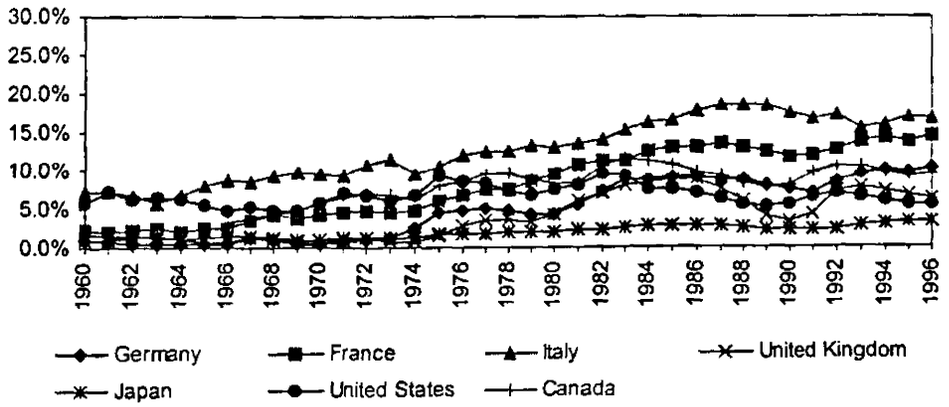
The G7 countries greatly differ from each other in the proportion of unemployed people in the total labour forces. Italy stands out among them for being one of the countries with the highest unemployment rate. Looking at historical time series data, it emerges that from the 1960s to 1990s the unemployment rate has progressively grown in all the G7 countries (figure 1.16.). The only exception is represented by the United States which nowadays has reached the lowest unemployment rate of the last 40 years. Since the 1970s, with alternating periods, the unemployment rate in Italy has consistently increased, and in 1998 Italy, together with France, reached 12% unemployment.

Figure 1.16. Unemployment rate.



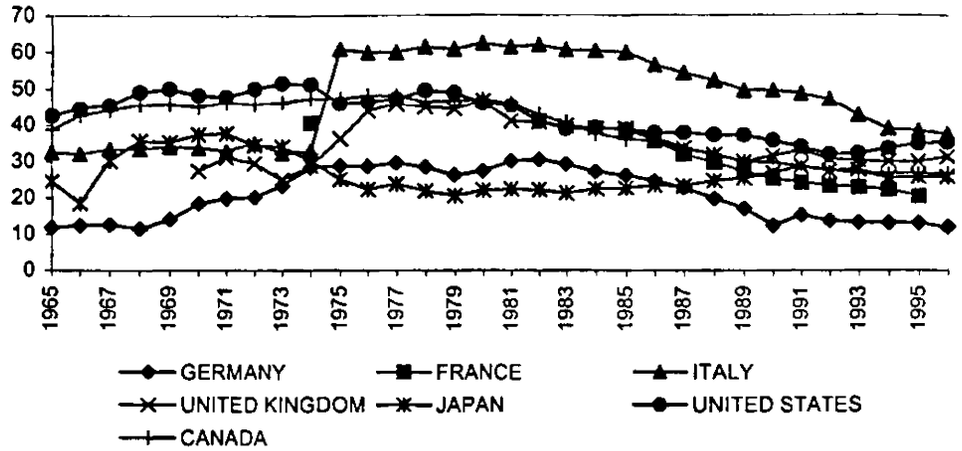
Moreover, OECD data show that Italy has the highest percentages of female and youth unemployment among the most developed countries (figures 1.17. and 1.18.). In the last 35 years women have always suffered a higher risk of being unemployed in Italy than in the other G7 countries. At the end of the 1980s female unemployment in Italy reached its peak, 18.6%; it then decreased slightly to 15.4% in 1993 and then again increased to 16.7% in 1996.

Figure 1.17 Female unemployment rate.



The Youth unemployment rate has become a serious problem in Italy in the mid-1970s. At that time the percentage of Italian youth unemployment almost doubled, increasing from 33% to 61%. To a lesser extent, in the same period a similar situation occurred in the United Kingdom. However, the United Kingdom at most reached 46% of youth unemployment, remaining distant from the Italian historical record. From 1983 the unemployment rate among young people in Italy has started to decline and in 1996 it arrived at 31%. It still remains higher than in the other countries, even though a certain convergence seems to emerge.

Figure 1.18. Youth unemployment rate.



4. Conclusions

The data drawn from the OECD statistics show some important characteristics of the Italian case.

First of all, educational attainment rates, although increasing over time, are nowadays lower than those of the other OECD countries. Indeed, the rate of change has not been so large and it has not occurred so fast (as in Spain) to offset the existing differences between Italy and the other OECD countries. Secondly, gender differences in education have disappeared. Thirdly, similarly to Germany and Austria, a vast majority of upper secondary students attend vocational-technical tracks. However, in contrast to Italy, both Germany and Austria have higher educational attainment at upper secondary level and Germany also at tertiary level.

Finally, the examined economic indicators show that Italy has had a strong economic development from the 1960s onwards, which places it among the most developed and industrialised countries. This makes the study of the factors which affect educational decision in Italy even more interesting. However, unemployment indicators, especially those related to women and young people, show that Italy is also the country among the G7 nations with the highest unemployment rates. This

factor certainly has important implications in individual educational decisions, which will be examined in the dissertation.

The next chapter deals with some of the possible explanations of the Italian case. Two theoretical mainstreams, Structuralism and Rational Choice Theory, are analysed and four main hypotheses, based on their main assumptions, are formulated.

CHAPTER II

THEORETICAL FRAMEWORK

1. Introduction

The study of the reasons for the low levels of educational attainment in Italy deals with the way individuals mature and make their educational decisions. Indeed, it is a study of the factors which negatively affect Italians' decision to continue education to the higher levels. In the sociological literature three main factors are commonly considered important in the educational decision process: family resources (both cultural and economic); the institutional structure of the educational system, and the benefits associated with a given educational choice - that is, labour market rewards and class benefits (upward mobility or avoiding social demotion).

The first two factors are usually treated as varieties of a structural explanation. According to this view, the individual's actions are mainly channelled by external constraints which strongly restrict the freedom of their choices. Economic, cultural and social resources in the family of origin have a strong influence on the individuals' educational career and the school system operates in a way which magnifies or maintains this effect, thus reproducing at school the existing social stratification. Some specific theories have been placed under this general theoretical framework, these include: the Cultural Reproduction Theory, the Theories on Class Differences in Ability and Aspirations, the Institutional Constraints Thesis, the Credentialism Theory and the Thesis of Industrialism.

The third factor - the benefits associated with different educational choices - is considered by Rational Choice Theory as the driving force which leads people to invest in education. This theory assumes that individuals act purposively in accordance with expected benefits (especially labour market opportunities) and the costs of obtaining these benefits. Thus, individuals are viewed not so much as pushed from external causes as attracted by future prospects (Gambetta, 1987). In

line with this perspective are the works of economists such as Becker and Thurow and of sociologists like Boudon, Goldthorpe and Gambetta.

The boundaries of these two theoretical approaches are not always clear. Both viewpoints recognise that the pupils' different family resources play an important role in (re)producing the class differences in educational attainment. Both speak about the differentiated costs and aspirations in continuing education that children from various social background have. However, the way of treating these factors in the two approaches is different. In the Rational Choice perspective costs and aspirations are considered part of the evaluation process in which an individual decides whether to remain at school or drop out. Thus, individuals take into account their resources, the costs associated with different educational choices, their academic ability, the likely returns to different educational pathways and form their expectations and aspirations about the future. On the contrary, in the structuralist view family resources and, more generally, the environment in which pupils grow up directly and indirectly (through the formation of their aspirations) strongly constrain the individual educational decision. In this perspective it is incorrect to speak of "choices".

These two antithetic viewpoints would explain the low proportions of Italians with a diploma or a university degree as the result of different forces: the structuralist view would emphasise the role of ascriptive and institutional factors; the rational choice theory would refer to the low occupational returns to education and to individual preferences and expectations on future outcomes.

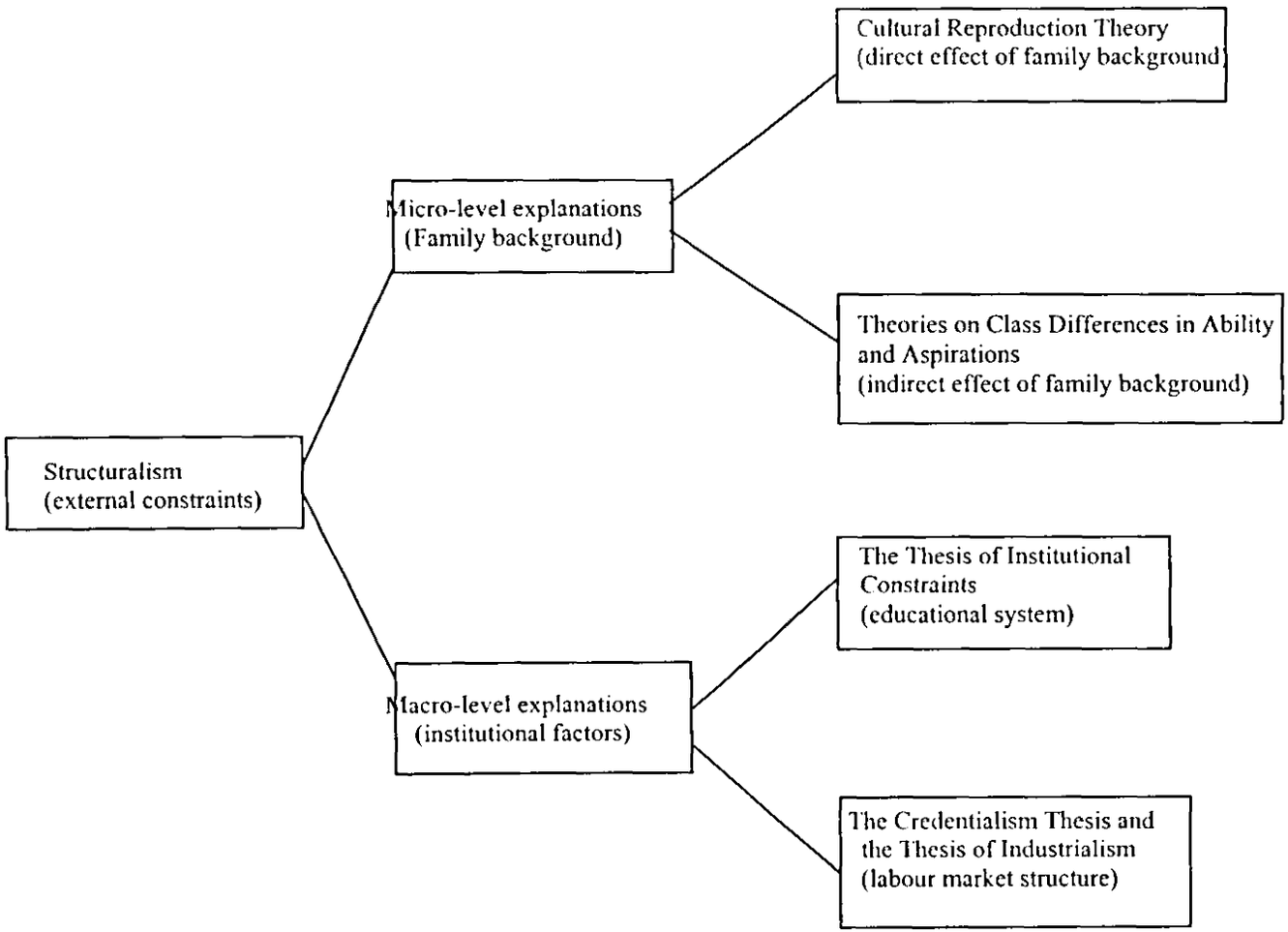
The next sections will present the main assumptions of these two different perspectives and their implications in the Italian case. The purpose is to discover the "appropriateness" of these theoretical issues in providing reliable reasons for the low levels of educational attainment in Italy.

2. Structuralist Theories

Stucturalist Theories stress the fundamental role played by external factors - the family background, the educational system and the labour market - in determining the individual educational allocation. They mainly focus on the analysis of the mechanisms by which social class of origin affects the distribution of educational credentials and occupational destinations. However, they differentiate themselves from each other either because they emphasise different mechanisms at work in the reproduction of social stratification in education, or because they arrive at different conclusions about the persistence of inequalities of educational opportunities in modern societies. Thus, some theories analyse the ways in which social differentiation in educational attainment is formed at the micro-level through the direct effect of cultural and economic family resources but also through the indirect influence of the family on the children's ability and aspirations. Others highlight the mechanisms which influence pupils' educational career choices at the macro-level in the labour market and within the educational system. Moreover, some theories assess the persistence, or even the strengthening of social inequalities. While others believe that the inequalities of educational opportunities are disappearing. On this last issue the Social Reproduction Theories and the Thesis of Industrialism contradict each other. The first argues that the modern capitalist way of production has reinforced inequalities among different social classes and no equality of educational opportunities has been realised. The second announces a process of equalisation of educational opportunities due to the transition from ascriptive patterns of occupational allocation to meritocratic ones. According to this last view, the increased demand for skilled people has led to an expansion of education and to a strong link between educational and occupational achievements in which there is no room for the influence of ascriptive factors.

The following sections focus on the micro- and macro-level structuralist explanations for the relationship between social origin and educational achievement and of its changes over time (figure 2.1.)

Figure 2.1 Factors affecting individual educational attainment according to the Structuralist approach



2.1 Micro-level explanations of social differentiation in education

2.1.1 The Cultural Reproduction Theory

The chances of continuing school differ according to the resources held by the pupils' families. There is abundant evidence that people from more advantaged social classes have higher financial and cultural support to embark in a long educational career than those from less advantaged ones.

A great emphasis on the effect of cultural background on the reproduction of social inequalities is in Bourdieu's Cultural Reproduction Theory (Bourdieu, 1977; Bourdieu and Passeron, 1977). According to this theory, dominant classes maintain their positions of privilege through the possession of cultural capital. With the expression "cultural capital" Bourdieu refers to the kind of culture learnt prevalently in the family, but also through interactions with friends and relatives. He found that it is positively related to school success, since it mediates the relationship between family background and school outcomes (Di Maggio, 1982). The academic success of children from higher social classes is determined by their familiarity with the world of art that school is daily related to. They have already acquired the code by which to decipher the meaning of cultural goods. Thus, the educational system realises a social reproduction function of class inequalities through the transmission of the dominant culture.

One of the strongest obstacles in the learning process of pupils from the lower classes is language. The language used at school is the language of the middle classes, and is more abstract and complex than the language of the working classes. Basil Bernstein (1973/75), in regard to this, distinguishes an "elaborate" linguistic code of the middle classes from a "restricted" code of the lower classes. The first code, relatively independent of any particular context, communicates universal meanings and often uses elaborate linguistic variations. The second, more linked to particular contexts, transmits particular meanings and rarely uses complex speech variations. School, using the "elaborate" linguistic code, clearly penalises the poorest classes.

This form of discrimination is often not immediately visible; it is concealed beneath an apparently perfectly democratic method of selection which takes into account only merit and talent. In this way, Bourdieu explains how the educational system manages to fulfil the function of legitimating social inequalities, which is necessary to the perpetuation of the social order.

2.1.2 The Theories on Class Differences in Ability and Aspirations

Among the factors generating social differences in educational outcomes there is ability. The unequal distribution of educational attainment among children from different social backgrounds would be explained by the unequal distribution of ability: lower social classes show lower educational achievement because of their lower academic ability while the inverse is true for higher social classes.

Some theses have been developed to explain the relationship between social origin and ability and between ability and educational and occupational achievement. They have in common the recognition of the mediating role played by ability in the reproduction of social inequalities in education, and more generally in social class attainment.

Erikson and Jonsson (1996) classify the most frequent explanations, used in sociology to interpret social differentiation in ability, into five groups: the first refers to the genetic transmission of ability; the second to the home environment of pupils; the third to the kind of knowledge (curricula) taught at school; the fourth to differences in health and nutrition and the last to siblingship size. While nowadays these last two explanations are of less interest thanks to the improved living conditions and the declining birth rates, the first three explanations are worthy of note.

Herrstein and Murray (1994), in their famous book *The Bell Curve*, strongly sustain the genetic thesis. This theory proposes that individual differences in ability are mostly due to genetic factors. Because of this strong genetic component of individual academic ability, according to these authors, no reduction of social inequalities in educational attainment is possible. Even if modern societies will rely

more and more on achievement (in contrast with ascription) class differences will emerge because different classes have different average levels of ability. The analysis of the relationship between ability and social class of destination is the focus of a recent article written by Breen and Goldthorpe (1999). The authors strongly criticise the idea that merit (measured by reference to Young's definition (1958), that is "IQ plus effort") is today the main determinant of individual status attainment. Their criticism is addressed in particular to Saunder's work where the rise of meritocracy in Great Britain is asserted.[1] They demonstrate that, even when ability and effort are taken into account, class inequalities in individual class destination persists.

Home environment is another important factor which affects students' ability and their educational career. It is well known that parents from higher social classes pay more attention to the education of their children: choosing better schools, helping them with homework or paying for private lessons, and involving them in extra-curricular activities. This kind of environment is particularly favourable to the development of pupils' ability and consequently to their educational success.

The importance of the methods of assessment, selection and organisation of knowledge, and the principles underlying them, in the production of social inequalities in education is emphasised by the works of Young (1971) and Apple (1978). They argue that it is not the family environment but the kind of knowledge that shapes school curricula and thus determines social differences in academic ability. This is because the school system is biased in favour of the middle class culture and teachers tend to evaluate according to the principles of the dominant culture.

Another set of theories have focused on another way in which social origin can indirectly affect educational attainment, which is the formation of aspirations. The Wisconsin model (Haller and Portes, 1973) was built to study social and psychological factors which mediate the influences of parents, teachers and friends

[1] According to the meritocracy thesis individuals reach the social destination they deserve. Thus, following this assumption, Saunder affirms that in Great Britain inequalities of opportunity based on social origin can be seen as being due to differences in merit.

on individual educational and occupational attainment. It developed from the simpler model proposed by Blau and Duncan (1967), in which the relationship between father's education and occupation on individual educational and occupational attainment was studied, into a more complex model which includes socio-psychological variables such as significant others' influence[2] and respondents' aspirations. Two assumptions about social differentiation in aspirations and attainment are behind this model: first, differences in aspirations between children from various social classes could explain social differences in educational achievement; second, social differences in aspirations could be the consequence of differences in their social and psychological experience. Thus, pupils from higher social classes have better opportunities to develop their cognitive skills, are encouraged by parents and teachers to continue education, obtain higher grades and form higher aspirations for their future. Conversely, children from lower social classes live in a less favourable environment, are less encouraged by their parents and teachers, gain lower grades and develop lower aspirations. Because educational aspirations are an important factor in explaining educational achievement, social differences in aspirations lead to social differences in educational attainment. Many empirical applications of the Wisconsin model have confirmed these assumptions and demonstrated that in the educational and occupational attainment process the effect of social origin is mediated by subjective factors (aspirations) and interpersonal influences (parents, teachers and best friends' encouragement) (Sewell and Hauser, 1980).

[2] "Significant others' influence was measured by a summated index of three variables: parental encouragement toward college, teachers' encouragement toward college and best friends' college plans (Haller and Portes, 1973, note in pag.62).

2.2 Macro-level explanations of social differentiation in education

2.2.1 The Thesis of Institutional Constraints

The school system provides a given set of rules and procedures regulating admission, selection and certification and the students have to adapt to the institutionally possible set of alternatives that the system offers. Some theories have pointed out the role of the structure of the educational system in constraining the freedom of individual school choices. In this perspective, the organisation, the procedures and the content of the school system are very important factors in the explanation of the unequal distribution of education.

In particular, three factors have been studied because they are considered important in influencing students' propensity to continue education: the length of school, especially compulsory schooling, track placement, and selective procedures (curricula, teachers' judgements and failures).

The length of compulsory schooling has an important effect on educational attainment: a prolonged compulsory education (16-18 years old) means an increase in the numbers of pupils from all social classes entering higher levels of education - because one might expect that people usually fulfil an institutional obligation. However, this does not always imply a declining influence of social origin on school attainments. This last effect is realised by a decreasing class difference on the probabilities of reaching upper secondary and university level (Mare 1981; Heath and Clifford 1990).

As demonstrated by a study about the expansion of education in Ireland, carried out by Raftery and Hout (1993), the two effects may not go together. From the analysis of the Irish case the authors point out that the egalitarian reforms of the late 1960s brought about a general increase in the participation rates in secondary schools. This reduced class differences in the overall distribution of educational attainments but did not affect the class selectivity. They stress that equality of outcomes increased not because meritocratic criteria now substituted ascriptive ones

but because the inclusion of a greater absolute number of pupils has led to greater equality among social classes, reducing selection. However, class barriers were not removed and the authors' conclusion is that the reforms did not affect the inequality of educational opportunity. Only when the participation rates at one level are saturated (in the sense that they are 100%) for the most advantaged social classes is a further expansion of education associated with a real decline in the effect of social origins on equality of opportunities.

Prolonged compulsory schooling can reduce inequalities in another way. A postponement in the choice of the earliest educational decision would diminish the influence of social background, which is stronger the younger the child is at the first decision point (Shavit and Blossfeld, 1993). The main idea is that older students are less influenced by their family origin than younger ones, both in their preferences and economic conditions. Indeed, the expected result is a decreasing association between social background and educational choice with an increase in the age of pupils and across the subsequent school transitions.

A longer period spent at school also enhances the wish to continue and increase knowledge or to acquire specialist abilities. A possible explanation for this outcome is that the more people progress in education, more they feel confident about their capacities, the more they appreciate studying and the more they value education as important for their future (Gambetta, 1987).

The second school factor which has been accused of reproducing social inequalities is track allocation. A large number of sociological and educational studies have been devoted to analysing the role of tracking and its effect in widening, reducing or simply maintaining existing inequalities among students from different social classes (Shavit 1984; Oakes 1985; Kerckhoff 1986; Gamoran and Mare 1989; Arum and Shavit 1995; Müller and Shavit 1995; Gamoran 1996). Their conclusions are different and often contrasting.

Some have stressed that the dominant groups manage to preserve their privileges by track placement (Shavit 1984). In this view, tracking serves to stratify students along race and class lines and to limit even further some students'

opportunities for economic and social success (Oakes 1985). Vocational education may serve this stratifying function, in which case low tracks would restrain the educational and socio-economic attainments of disadvantaged pupils, relegating them to low-level occupations and social status.

Shavit stresses the importance of tracking in modern societies as a way "to reconcile a dilemma between an exclusionary and an integrative function of secondary education" (Shavit 1984: 218). A need for mass acculturation comes with a desire to restrict educational opportunities to continue the hegemony of the privileged strata.

In one of his studies Shavit (1990) found a possible explanation for the higher level of education attained by Arab-Israeli men when compared to Oriental Jews. His explanation was based upon the different availability of academic secondary education to the different groups. Arabs, even if they are the less privileged groups of Israel, have a secondary education which is predominantly academic while Oriental Jews are tracked for the most part into vocational tracks. The consequence is that the availability of non-academic tracks induces Oriental Jews, who could not succeed in academic ones, to attend some form of alternative secondary education. The lack of this alternative for Arabs may explain their attitude towards continuing in school and arriving at a higher level of education.

Gamoran and Mare (1989) found that tracking is not a neutral factor in the school system but it reinforces the pre-existing differences among pupils. Pupils who attend higher tracks (college tracks) have higher educational achievement and higher probability of graduation than those who attend lower tracks (noncollege tracks). Moreover, these differences are due not only to differences in previous educational achievement or in socio-economic background but also to the effect of tracking itself (net track effect). Considering that pupils from less advantaged social classes are more likely to be assigned to noncollege tracks, the authors concluded that tracking widens social differences.[3]

Moreover, students from vocational schools may be seen as students unable to succeed in academic courses. It may be that, in the labour market, employers view

those with a diploma from vocational education as having not succeeded at school and prefer non-vocational students, who appear to be more trainable (Thurow 1975). Thus, in job competition, people with vocational certification could be disadvantaged in comparison with those from academic schools and university. Given that students assigned to academic tracks usually come from the higher classes, one can affirm that tracking is an obstacle to social mobility and that it is used to reproduce social inequality over generations.

A contrasting viewpoint stresses instead that the low tracks can increase the educational and economic opportunities of the poor and minority groups by providing them with specific, marketable occupational skills (Gambetta, 1987; Arum and Shavit, 1995; Müller and Shavit, 1995). A recent study carried out in the USA by Arum and Shavit (1995) has found that vocational education increases the probabilities of being employed versus being unemployed and of acquiring a skilled job relative to an unskilled one.

However, it also inhibits chances of continuing study, attending college, and the probability of obtaining a prestigious occupation. The authors' conclusions are that vocational education has a positive effect on people from the working classes who are unlikely to continue their studies, since it offers them a good alternative to enhance their chances of finding a job and, in particular, a qualified job.

The last school factor here analysed is in reality a combination of factors (curricula, teachers' judgements and failures) which I group under the label "selective procedures". The reason for grouping them is that they all concur to one of the main explicit functions of the educational system which is "selection". Thus, what is taught and the way of teaching, how school evaluates the results and how pupils react to these judgements are very important matters in the analysis of the role of institutional constraints in determining individual educational choices. Selection is correlated with the evaluation of abilities, cultural knowledge and adaptation to the school system. It creates differences of merit among pupils and, in the cases of the less "capable", determines the phenomena of failures and dropping-out. If this

[3] However, they discovered an interesting equalizing effect of tracking on race and gender

function is an inevitable part of education, the use of distinguishing instruments based on social inequalities can change selection into "exclusion" and can perpetuate class stratification.

The content of school programs can play a very important part in educational selection if it is structured in a way that benefits some pupils compared to others (Young, 1971; Apple, 1978; Bourdieu, 1977). Moreover, the employment of a single curriculum, standardised for all pupils, can be another limit to the equalisation of educational opportunities. The classroom is not constituted by a homogeneous group of pupils but by different individuals, with their differing aspirations, attitudes and capacities. They come from different environments and they have different life experiences. Rigid curricula can be a constraint to overcoming the cultural disadvantage that working class children experience and to developing the different abilities of pupils. On the contrary, the possibility of choosing the subjects, in a multidisciplinary approach of study, can play an important role in increasing the interest and motivation to continue school and in reducing the probabilities of failure, especially in the case of disadvantaged individuals.

How school evaluates knowledge and skills may also have an effect on individual educational decisions. Academic achievement influences the choice of continuing or dropping-out and the choice of which type of school to attend. There are two ways in which marks, failures and more generally teachers' judgements can affect these decisions (Gambetta, 1987): they act on individual psychological processes, influencing pupils' self-evaluation; and they act on the evaluation of the costs of education and learning.

Concerning the first influence, failures and bad school reports surely have a powerful negative effect on the individual's self-esteem. They determine an accumulation of frustrations and the development of a sense of inferiority. The pupil feels responsible for his\her failures and "unsuited" to educational learning. He\she develops more a form of distrust against his\her capacities to profit from school attendance than a negative reaction against the school system. A situation of discomfort arises and the relationship with teachers becomes difficult. Pupils who

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differences.

experience failures are also regarded as pupils of a "B set" by their schoolmates and teachers, and are pushed to one side in the classroom, with few possibilities of recovering their educational disadvantage. This can activate a "labeling" process in which less academically "successful" pupils are labelled as low-able people and treated differently (Rist, 1977). In this situation lower teachers' expectations can be self-fulfilling, that is they act on pupils' self-esteem, lowering it, and contributing to their failure.

It is very likely that teachers' negative judgements exercise a stronger influence in the case of students coming from lower classes: in fact, less advantaged families are usually more inclined to accept the school's evaluation. This can be explained in different ways. Poorly educated parents are likely to perceive their children's failures more as the product of individual inability than the product of institutional incapability in eliminating cultural disparities (Bourdieu and Passeron 1964). They may give more authority to the teachers' reports than more educated parents because of their insufficient ability to judge the teachers' opinions.

Another reason is related to the costs that they will have to take on in the case of a wrong choice. The restricted economic resources of pupils from lower social classes make failures and low marks more negatively effective on their probabilities of staying on at school. When economic resources are limited and the academic achievement of their children is low, less advantaged class families have more incentives to take their children out of school than middle and high class ones. They may consider it too expensive to sustain the cost of a longer period at school (in the case of their child's failures) or to pay an additional amount of money for private tuition. In this case institutional constraints work together with family economic constraints.

2.2.2 The Credentialism thesis

Pupils' educational achievement are influenced not only by the educational options on offer, but also by the state of the labour market. In this perspective both the Thesis of Credentialism and the Thesis of Industrialism analyse how the

structure of the labour market affect class differences in educational and occupational attainment.

In Collins' work, *The Credential Society*, the massive expansion of the "political" labour (non-productive labour), the rise of a huge "sinecure sector" of government employment, massive educational institutions and the growth of the tertiary sector are the main causes for the development of the credential system. The credential system is a system in which educational credentials are the principal means for acquiring a job.

Collins refers to the American society, characterised by high levels of educational attainment in secondary school and low rates of graduated people from university. He explains that the U.S. educational system is a "contest mobility" system which means that there is no sharp dividing point between elite and non-elite schools at secondary level and it is quite easy to switch from a course of study to another or to re-enter after dropping-out. However, school selection has not disappeared, it is only delayed until the university level, which results in a lengthening educational sequence. As regards the labour market, the general increase in the levels of educational attainment has been accompanied by a tendency to upgrade requirements relative to occupations, especially to professions.

Thus, according to Collins, the growth of this system of educational credentials for employment has not reduced social inequalities but it has only hidden the means of domination. In fact, the expansion of education has not increased the opportunities for social mobility. There are three reasons: 1) education does not provide occupational skills; 2) educational credentials represents only an "artificial" good for employment; 3) the order of groups' access to credentials has not changed their relative stratification.

In Weber's thought "credentialism is a form of closure designed to control and monitor entry to key positions in the division of labour" (Parkin, 1979, p.48). In the same way, Collins defines credentialism as the means of building specialised professional and technical enclaves, in order to monopolise jobs for specialised groups of workers.

2.2.3 The Thesis of Industrialism

In the Thesis of Industrialism individual educational decisions are strongly shaped by entrepreneurs' demands and, more generally, by labour market needs. Compared to Collins' analysis, however, this thesis presents a more dynamic explanation of labour market changes and the consequences on individual educational decisions. Comparing the previous traditional agriculture-based society to the present modern industrial-based society, the Thesis of Industrialism explains the reasons for the growing importance of education. In a traditional society the investment in education is of minor importance because family and personal relationships are highly effective in determining future productive roles (Grusky, 1983). On the contrary, in an industrialised economy, family ties and direct inheritance play a marginal role in occupational allocation because the continual and rapid changes in technology require highly specialised and skilled work forces. For the efficiency of industries, workers cannot be assigned to jobs by traditional caste, sex, family or racial groups but only by their credentials. And the most important credential is educational training. Thus, individuals searching for a job have to invest in education to avoid being marginalised in the labour market.

As a consequence of this state of affairs an expansion of education takes place, with a growing proportion of people reaching higher levels of education. According to this theory, the general growth in educational participation rates is mainly due to an increase in the attendance rates of vocational and technical schools. In fact, these schools provide a training which better corresponds to the needs of industry and prepares the future workers for industrial professions, such as managers or engineers. However, the need for flexibility in the work force and the increasing educational demand of the citizens, who consider schooling as an important resource for social mobility, also lead to an increase in the demand for general education. (Kerr, Dunlop, Harbison and Myers, 1960/73).

In contrast with Collins' point of view, the followers of this thesis affirm that the strict link between job allocation and the possession of educational qualifications promotes a process of equalisation of opportunities and of social mobility (Treiman,

1970). Parsons (in Grusky, 1994) underlines this point, adding that competence is a critical element for determining inequality. It puts a premium on capacity, independent of ascriptively particularistic considerations, and reinforces the importance in society of equality of opportunity. Thus, schooling becomes an instrument for social mobility rather than an instrument for the maintenance of status over generations.

Another effect of the strong association between educational attainment and occupational destination is a highly differentiated structure in the labour force. In contrast to the traditional society, in the industrial society there is a variety of skills and working conditions which are ordered according to a hierarchy, and characterised by different levels of authority and responsibility. Thus, a range of qualifications corresponds to a range of jobs, each with their own set of rules about hiring, pensions, promotions, salary and so on.

All the above described features of industrialisation - expansion of education, increase in educated people from vocational training, equality of opportunity, highly differentiated structure of labour forces - are distinctive of a modern society in which the agricultural sector has only a marginal role. Indeed, in an industrialised society, a low percentage of the population is employed on farms and agriculture is treated as another industry, highly specialised and organised. The fact that a high percentage of the work force are engaged in agriculture is considered a sign of a less developed economy, a typical feature of traditional and antecedent forms of society (Kerr, Dunlop, Harbison and Myers, 1960/73).

3. Some hypotheses based on the structuralist view

According to the theories described above, which have been considered under the common heading of "structuralism", the low levels of educational attainment in Italy could be the consequence of the strong constraining effects of social origin, the educational system and the labour market structure on individual educational achievement.

Bourdieu's Cultural Capital Theory and the other theories, focusing on the way social inequalities are reproduced in education, would find an explanation of the Italian case in the persistent and strong effect of social origin which could have inhibited a broader expansion of education. Through cultural and socio-economic resources, ability and aspirations, family of origin could even nowadays affect individual probabilities of school transition and success. As a consequence, apart from the children of upper classes who have always more resources to help them reach the higher levels of education, only a few students would stay on in school until the acquisition of a university degree.

Comparative research (Shavit and Blossfeld, 1993) shows that, even if there has been a general educational expansion in all the countries analysed, including Italy, the association between social origins and educational opportunity has not declined.[4] These empirical results are in stark contrast to the assertions of the Thesis of Industrialism. A process of equalisation of educational opportunities does not appear to have occurred, even if at the primary and secondary levels children from lower strata are more likely to enter and complete school than in the past.

One of the objectives of this work is to find out how social origin affects individual educational decisions in Italy and whether its effect has changed over time.

3.1 The "untestable" hypotheses

Structuralist Theories describe many mechanisms by which social origin can constraint educational decisions, however, not all of them can be empirically tested in this dissertation and not all of them can explain the difference in educational attainment between Italy and the other OECD countries.

An example is the study of the effect of ability and aspirations on educational attainment. In the Italian case this effect cannot be measured because no data are available. The Italian educational system does not seem interested in the

[4] The only exceptions are Sweden and the Netherlands, in which the equalisation of socio-economic conditions (probably due to a comprehensive welfare state) has brought about an equalisation of educational opportunities.

measurement of IQ. There is a sort of aversion to this topic and a concern for those consequences which could derive from empirical research focusing on individual ability. However, the lack of these variables should not prejudice the empirical analysis for two reasons. Firstly, the literature on this subject presented above demonstrates that a large part of the effect of ability and aspirations is a mediating effect of social origin. Secondly, it is not possible to imagine the existence of country differences in the role that class differences in ability and aspirations have on educational achievement. Even if one supports either the genetic explanation or the environmental (family or school) explanation on the formation of social differences in ability and aspirations, it is nevertheless hard to believe that ability and aspirations operate in the different ways in different countries. Thus, the lower educational attainment rates in Italy cannot be explained by referring to these factors.

The effect of two of the three school factors, mentioned in the Institutional Constraints Thesis, on the likelihood of continuing education cannot be directly measured in this dissertation. They are the length of compulsory schooling and the rigidity of the school curricula. However, some considerations and speculations on these school characteristics and their influence on individual educational careers could be made.

It has been noted that the length of compulsory schooling can affect the propensity of continuing education. More specifically, a longer period spent at school increases this propensity. Recently has the Italian Parliament has voted in favour of the prolongation of compulsory schooling until 15 years of age. This was implemented from the academic year 1999-2000. Thus, until a few months ago Italy had the lowest school-leaving age among European countries, at only 14 years of age. One could argue that the present lower rates of educational attainments, especially at upper secondary level, is more the result of a short compulsory school period than of other factors. It is impossible to test this hypothesis directly because only in the next years the concrete application of the Parliamentary norm can tell whether prolonging compulsory schooling really makes a substantial difference in

the probabilities of continuing in education. However, some considerations can be formulated on the basis of the most recent data.

In the academic year 1993-94 more than 90% of those who completed compulsory schooling (elementary plus lower secondary school) made the transition to the upper secondary level. This datum is in line with the rates of transition of other OECD countries. Where Italy is different is in the proportion of people who reached the upper secondary school diploma: 67% (year 1995) among the population aged 18, which is lower than the mean of the other OECD countries (80%) (OECD,1997). Thus the problem is not in the transition to upper secondary school but in the completion of this level.

OECD statistics show that the countries with a higher age of compulsory schooling tend to have more young people at school until the end of upper secondary education (OECD, 1997, table C3.1). We can speculate that making one more year compulsory (preferably it would be two years) would push pupils to spend at least one more year in education, even only to fulfil the legal obligation. Considering that the higher rate of dropping out is in the first year (14,4% of those enrolled in 1992; ISTAT, 1996), we can suppose that a prolonged compulsory schooling would increase the proportion of students with at least one year of upper secondary school by about 20% (10% would be composed of those who stop after the actual period of compulsory schooling and another 10% would be those who drop-out after the first year of upper secondary school attendance). The recognition of this year (or two years) of upper secondary school, through an official certification, would lead to a less dramatic difference between Italy and the other countries at this educational level.

Finally, I am inclined to believe that a longer period at compulsory schooling could have another positive effect, which is pupils would have one more year to decide which type of training to embark on.

Regarding the organisation of the school content, it is hard to test the hypothesis that more flexibility in the Italian school system would improve pupils' educational attainment. However, there are reasons to believe that it could have a

positive effect.[5] The actual situation is characterised by a very inflexible curricula in which pupils cannot choose which subjects they want to study. School content is decided at central level by the Ministry of Education (Ministero della Pubblica Istruzione) and uniformly applied at the local level. From the unification of the country, due to the highly differentiated historical experience of the regions, all the Italian educational system has been founded on the promotion of a single national identity, language, and culture. This has led to a high degree of "standardisation" of educational provisions which means that curricula, as well as teachers' training, school-leaving examinations and school budgets meet the same national standards[6] (Allmendinger, 1989). As a consequence there is a high degree of rigidity which is manifested in the difficulty of changing educational decisions when a certain academic route is taken. At upper secondary level, for example, to switch from one type of school to another in mid-course means to waste a lot of time; in this case, the years spent in the first school are not recognised and one has to start from the beginning in the new chosen school. Moreover, dropping-out before the final diploma examination leaves pupils without any formal recognition of the time spent at school (Gambetta, 1987, pp.47-48). This rigidity of the institutional structure could negatively affect educational attainment rates: firstly, because pupils who perceive themselves as having made a mistake in taking a certain educational route are discouraged change track; secondly, because the attendance of some years of upper secondary, without arriving at the final school-leaving diploma, is not certified while in other countries it is (e.g. France).

[5] See also concluding chapter, section 4.2.

[6] Allmendinger makes the distinction between standardised and stratified educational systems. In contrast to the concept of standardisation, the concept of stratification assumes variations in the organisation of schools, and in their curricula and academic requirements. Müller and Shavit (1998) classify the Italian educational system as a system with a high degree of standardisation and a medium degree of stratification. It is stratified because at upper secondary level the Italian education is differentiated into tracks (academic, vocational, technical) but the degree of stratification is medium because specific vocational skills are taught at an intermediate level.

3.2 The hypotheses empirically tested

According to the Institutional Constraints Thesis, one of the main factors which favours the reproduction of social inequalities in education is the tracking system. Track allocation may reproduce social stratification at school by channelling people from lower social classes towards vocational tracks and maintaining the "exclusiveness" of academic tracks.

In the Italian educational system tracking occurs at upper secondary level. It is at this stage that the school system - which has provided until this moment a general and equal education for everybody - splits into various tracks. The choice of one type of the different tracks is considered free, because it is left to pupils and their parents. No academic tests after the completion of compulsory schooling are used to channel pupils towards compulsory tracks. However, the choice of the type of school to attend is influenced by teachers' evaluations. At the end of compulsory school teachers write a report on pupils' aptitudes and capacities and they make a clear proposal regarding the school which they consider more "suitable" to each student. This judgement can have a strong influence on the choice made but this influence can also differ according to pupils' social origin (see paragraph 2.2.1 of this chapter). Thus, in Italy track allocation cannot be considered as completely determined by external factors (in this case teachers' judgements) but it cannot also be regarded as simply the result of individual preferences.[7] Given these premises, the question now is how tracking in Italy can serve a stratifying function, differentiating educational (and furthermore occupational) opportunities according to different social classes.

One way is to channel the majority of pupils towards vocational and technical schools which, by their nature, are more oriented to the immediate labour market allocation than to preparation for university studies, so diverting them from a longer educational career. A minority of students, mainly children from the most privileged social background, would instead attend the academic schools and continue to university. As suggested by Shavit (1990) the availability of non-

[7] The ambiguity of this situation, in between choice and constriction, is also reflected in the text of this thesis. When speaking about tracks in Italy it is not easy to define whether individuals "choose" one type of tracks or "are allocated" to it.

academic tracks can induce a great part of the student population to attend them instead of going to academic schools, so reducing the proportion of those who enter university. Thus, the first hypothesis, that will be empirically tested, can be formulated as following:

The low levels of educational attainment in Italy are the consequence of the persisting "selective" character of the academic schools, which mainly attract children from the upper classes. While the majority of the student population attend vocational and technical education which diverts them away from university education.

Failures and the teachers' judgements influence the choice of continuing or dropping-out. One way in which teachers' evaluation on pupils' capacities can affect individual educational choices, that is the choice of track at upper secondary level, has already been pointed out. However there are other ways and moments in which negative teachers' judgements appear to be determinant in a pupil's academic career. In Italy pupils who fail in reaching a sufficient scholastic level can be forced to repeat the year (*bocciati*). This can happen at each educational level and at the end of every year (not only at the end of a complete level of education).

ISTAT data (1996) about selection in upper secondary school confirm that there is a strong link between failures (*bocciature*) and the decision to drop out. One of the major causes for abandoning school, especially in the first years of upper secondary school, are failures experienced during the course of study. Moreover, failures are more likely in vocational and technical schools than in academic schools. This suggests that the institutional structures through which individuals pass have highly significant effects on the outcomes. For this reason, it is important to analyse the effect of tracking on the successive educational and occupational outcomes. Thus, an important issue to analyse in testing the first hypothesis, formulated above, is related to the effect of the Italian track system on students' achievements. To summarise, *the higher rates of vocational and technical schools attendance not only divert the majority of the student population away from university education but also depress the rates of success at secondary level.*

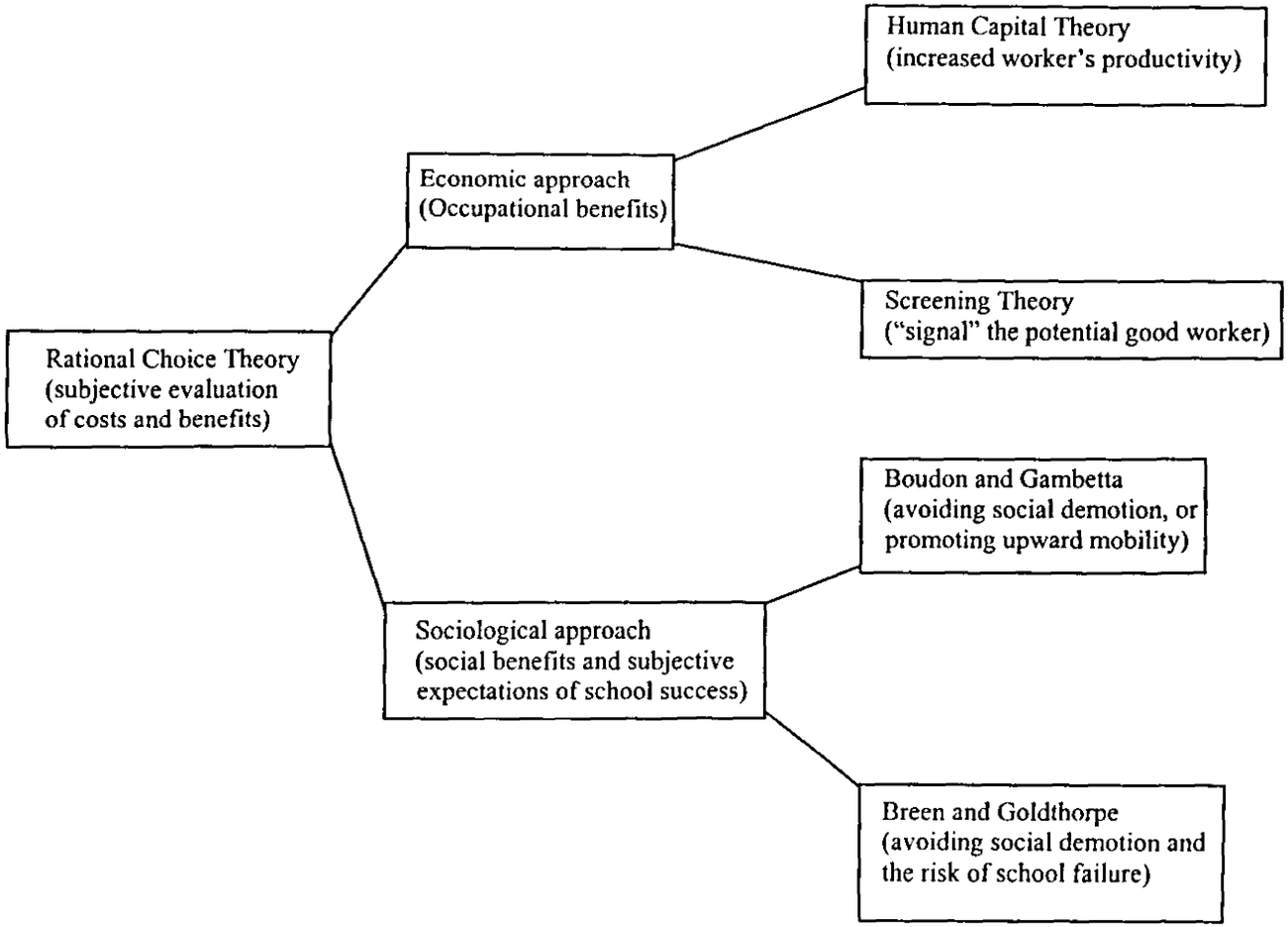
Besides these factors, which are linked to the organisation of the educational system, there are labour market constraints which can affect individual educational decisions, among them the degree of modernisation. The followers of the Thesis of Industrialism could argue that the Italian low educational attainment rates depend on the remarkable economic differences existing between the southern and northern regions. An expansion of education, which is one of the main features of modern and industrialised societies, would have occurred in the more economically developed North of Italy but it would have not taken place in the underdeveloped South. Thus, people in the South would not invest in education as much as those in the North because the local underdeveloped economy has no need for skilled workers.

According to this assumption, the second hypothesis to be tested can be formulated as following: *In the economically underdeveloped Southern regions of Italy people are less educated than people in the North and this lowers national educational attainment rates.* The North has levels of educational attainment similar to the most industrialised countries while the South is behind, not only economically but also culturally. In this way the general results about Italy have to be read bearing in mind regional differences.

4. Rational Choice Theory

A contrasting theoretical perspective to the Structuralist approach is offered by Rational Choice Theory (fig.2.2). In this theory the notion that man's behaviour is mainly driven by external constraints is placed in doubt and substituted by the conception of a rational man who evaluates all alternatives before making his choice. In this evaluation process subjects take into account various elements, including economic resources, personal academic ability and expected labour market rewards (Gambetta, 1987). Moreover, they choose among the available alternatives those which present the lower costs and the higher benefits, in order to maximise their utility. Thus, individuals rationally choose to leave or to continue school and to attend one kind of school instead of another on the basis of expected costs (direct

Figure 2.2. Factors affecting individual investment in education according to the Rational Choice Theory.



costs of learning, foregone earnings, social costs) and benefits (increase in earnings and occupational status or, more generally, an improvement in social status). The existence of constraints is not denied but reduced to a mere factor, subject to individual judgement, which does not decrease the individual ability to make choices. In this view the effect of constraints on opportunities is not limiting but it is considered part of the costs associated with a certain option.

In the following sections both the economic and the sociological literature are presented and some hypotheses for the Italian case are derived.

4.1 The economic literature

A lot of works have been written based on the Rational Choice Theory in the economic literature. However Becker's Human Capital Theory (1975) holds a very important position among those who first develop this approach. In Becker's work the expression *human capital* is used to indicate a number of factors which are considered as the determinants of individual increased productivity and, for this reason, treated like any other form of material wealth used in the production of more wealth. These factors include on-the-job training, schooling, other forms of knowledge (like information on the economic situation) and health improvement.

The main assumption of his theory is that human capital, especially education, is the principal factor which can explain the unequal distribution of earnings and income. According to Becker, more highly educated and skilled people almost always tend to earn more than others. The consequence of this way of thinking is that investment in human capital, either to reach a high level of education or, more generally, to increase human skills, causes the private rate of return to grow and decreases the risk of unemployment.

Becker develops this argument in the following way. Low-earning individuals can decide to invest in their human capital through on-the-job training in order to increase their productivity and consequently their wages. Learning new skills implies a cost which consists of the time spent training, the effort made, the teaching provided by others, the equipment and the material used. Who pays this

cost? To answer this question, Becker distinguishes between general and specific training.

General training increases the general productivity of workers not only in the firm in which they are working but also in many other firms. Consequently firms are not willing to pay the total amount of the costs and, conversely, people receiving general training are willing to pay some of these costs since training raises their future wages. The most common way for employees to pay is by receiving wages below their current productivity. Once they complete their training their wages will rise.

On the contrary, specific training increases workers' productivity more in the firm providing it than in others. In this case, employees are not prepared to pay for training that benefits the firm almost exclusively and the costs are supported entirely by the firms themselves, which expect larger profits at the end of the training period. According to Becker, these specific investments help to explain the fact that, in U.S., unemployment is greater among unskilled than skilled workers. This is because more specific capital is invested in the latter and employers have special incentives to keep them: to avoid losing their investment.

Becker also considers other forms of investment in human capital, provided "outside" the firm. The process of training is often left to the school system. In this case, besides the direct costs of schooling (books, fees, tuition, supplies and so on), a student has to sustain the indirect cost of the loss of earnings, due to the fact that the pupil cannot work because he\she is at school. However, the benefits of major future job opportunities and earnings justify these costs. Indeed, the rates of return are lower at younger ages - due to the cost of investment in education which depresses earnings - but they increase consistently and rapidly after this period of training.

A strong criticism of this theory is made by Thurow; looking at data from the 1970 U.S. Bureau of Census in his book *Generating Inequality*. He shows that the distribution of earnings does not closely follow the distribution of the educational component of human capital. Moreover, while over time the distribution of education has become more equal, the distribution of earnings has become more

unequal. This finding cannot be explained by the wage-competition model. According to this model an increase in human skills causes a higher level of marginal productivity and earnings, with a decrease in the earning inequality distribution. The distribution of earnings also varies within the same group of workers and the same educational level; it means that the cause of this variance must be a factor other than education or training.

To counter the "wage-competition" model of the Human Capital Theory Thurow proposes his "job-competition" model. In the job-competition model the workers no longer compete with each other for the wages that they would accept (like in the wage-competition model), but for job opportunities. The allocation of individuals in the labour market depends on two factors: the individual's relative position in the labour queue and the actual distribution of job opportunities in the economy.

The labour queue is a rank composed of workers with different sets of background characteristics. With the expression "background characteristics" Thurow introduces a more complete concept which includes not only education but also innate abilities: age, sex, personal habits and all the features that can define an individual and differentiate him\her from the others. The distribution of the labour queue is influenced by the demand of employers for individuals with a particular set of background characteristics and it determines the order of access to job opportunities. It is for this reason that a general increase in the level of education leads a person looking for a job to increase his\her level of education in order to defend his\her relative position in the labour queue.

The preferences of employers, when screening the labour force, is determined by the foreseen training costs, with the consequence that they will choose the workers with the lowest expected training costs. In this theory, education becomes a very powerful indicator in the choice of a good worker. In fact, employers think that those who reach a high level of education have more capacity to learn faster and easier, decreasing the costs of future training. Thus, the function of education is not seen as conferring skills and therefore higher productivity and wages on the worker, but rather to certify his/her "trainability". Education is

considered a form of training that increases the general abilities of people and teaches them a sense of "discipline" that is an important aspect of the daily life of the firm.

An important assumption of this theory is that job skills are mainly acquired not before entering the labour market but after finding employment, through on-the-job training. In this way the labour market is less a place in which the existing skills are allocated and more a place in which training opportunities are offered to different workers. This means that skills are often created when there is a demand for labour with that skill and, consequently, the supply of trained labour depends on the demand for trained labour. According to Thurow, this can explain why the distribution of earnings varies within the same group of workers and the same educational level. Indeed, even if workers have the same background characteristics (education, innate abilities, age, sex, and so on) they do not receive the same amount of training, it being mainly provided by employers. After this period of training the initially equal workers have become unequal, due to the assumption of new skills.
In conclusion, both Becker and Thurow's theories assume that individuals are rational and decide in accordance with their future expectations of employment. However, in the Human Capital Theory education increases the marginal productivity of workers while in the Screening Theory education essentially functions as an indicator of the worker's trainability.

4.2 The sociological literature

In the sociological approach of Rational Choice Theory the focus is not only on the subjects' response to labour market objective circumstances but also on the subjects' aspirations, intentionality and preferences and on their belief of being or not being successful in the academic career (Boudon, 1974; Gambetta, 1987; Goldthorpe, 1996; Breen and Goldthorpe, 1997). Moreover, in the sociological literature a particular attention is devoted to studying class-specific variations in these factors. The assumption is that pupils (and/or their families) evaluate

educational alternatives and form their educational preferences according to their parents' socio-economic position.

Boudon (1974) explains differences in individuals' educational aspirations not as the result of external constraints which govern their decision making process (as in the Cultural Reproduction Theories and in the Thesis of Institutional Constraints), but as the result of a rational evaluation of the social costs and benefits which each social class attaches to various educational outcomes. Children from higher social classes have more to lose from not reaching the higher educational levels than children from less advantaged social classes. They aim to maintain their social position of origin and the possession of a university degree is an important resource to avoid the risk of downward mobility. Moreover, due to the large availability of economic resources, the costs associated with a long educational career are low for them. On the contrary children from less advantaged social classes have higher costs and lower benefits in continuing school beyond a certain stage relative to their point of social departure. They do not risk social demotion from leaving school early because their social position is already lower, while to reach higher educational level they suffer higher costs. Thus, even though educational aspirations are the same the likelihood of continuing school is higher for those coming from middle class than those from working class. Boudon reaches the conclusion that pupils from working class families need a greater income increase, higher ability or higher labour market returns than pupils from middle class to make them more prone to stay on in education.

Even though generally in agreement with Boudon's thinking, Gambetta criticises Boudon's assertion that the higher the social class of origin the higher the benefits of obtaining a university degree (Gambetta, 1987, pp.182-187). He sustains that the opposite can be true, that is the lower is the social class of origin the higher will be the benefits associated with a university degree. The advantages of reaching high levels of education are higher for lower social classes because of the longer upward mobility they provide, relative to the point of social departure, and of the lack of alternatives. Thus, pupils from working classes suffer minor social costs

from not staying on at school but higher benefits from continuing school at the higher levels than pupils from middle classes. Conversely, middle classes pupils have higher social sanctions to drop school early but they can anyway rely to alternative means to maintain their social position.

Gambetta explains the fact that there are constant social class differences in educational attainment distribution, with children from working classes investing in education less than children from middle classes, referring to the influence of class-specific preferences. He affirms that individuals' educational decisions are made in accordance with personal preferences but these preferences can be distorted by class specific biases (such as the norms of one's own social group) which determine a different distribution of educational preferences among social classes. Gambetta graphically illustrates how an hypothetical distribution of educational preferences can differ according to the social class of provenance. Thus, it has a skewed shape towards the extreme where education is highly preferred by middle class children; while it is more normally distributed between the two extremes of minimum and maximum preference towards education for working class children, with a great part of them in a situation of uncertainty (Gambetta, 1987, pag.184 fig. 5.2).

In a revised formulation of the Rational Choice Theory, Breen and Goldthorpe (1997) propose a formal mathematical model in which individual educational choices are considered the result not only of the evaluation of costs and benefits of making different decisions but also of the probabilities of being successful or failing. They assume that the expected probabilities of success vary by social class due to class differences in ability, in the availability of resources, and in the risks attached to various educational alternatives. This risk, as well as ability and resources, is unequally distributed across social classes and determines more or less ambitious educational choices.

Considering education as a sequence of transitions from one level to another the authors build a model in which at each transition point individuals, and their parents, have to decide whether to continue school or to leave and enter the labour

market.[8] Their educational decisions are affected by the costs of remaining at school, by the probability of success (or failure) and by their subjective beliefs about various educational outcomes, which determine access to different social class destinations.

According to Breen and Goldthorpe three mechanisms work in reinforcing class differentials in educational choices and attainments.

The first is called *relative risk aversion* and indicates the family's desire to avoid the downward mobility of their children, which means maximising the chances of their children maintaining at least the social class of origin, or better, reaching a higher social class. From this point of view, more advantaged social classes will have a stronger interest in continuing school than less advantaged social classes, in order to preserve their social position.

The second mechanism is represented by *differences in ability and expectations of success*: people from less advantaged social classes are less likely to continue their studies compared to more advantaged social classes because of their lower level of ability (which strongly depends on social background) and their lower subjective expectations of success. Breen and Goldthorpe sustain that for a pupil from a working class background to continue school to higher levels he\she needs higher expectations of success than a pupil from a middle class background.

Differences in resources is the third mechanism in action: the family's resources have to exceed the costs of continuing school. Also considering fixed costs of education, this assumption adds another disadvantage for pupils coming from a lower social background. The lower level of resources makes it more unlikely that they will choose to go on to higher levels of education. As a consequence of this last postulation a reduction in the costs of education can have an equalizing effect because it reduces the gap between resources and costs for lower social classes.

The influences of family's aspirations and resources have been already pointed out in Boudon and Gambetta's works, however differences in expectations of success need further exposition. Breen and Godthorpe affirm that among the factors which lower the probabilities of staying on in school of people from less

[8] The choice to "stay or leave" in education is an example made by Breen and Goldthorpe to explain their model. In fact, their theory is more general; it refers to a generic choice between more ambitious and less ambitious educational options.

advantaged social classes an important factor is their lower expectations of school success. From this assertion two important questions arise:

(1) How do individuals form their expectations about school success or failure?;

(2) Why do individuals from lower social classes have lower expectations about school success?

An individual can rely on their past academic achievement when they try to estimate their future probability of school success (Gambetta, 1987; Breen and Goldthorpe, 1997). Low academic achievement and failures usually reduce the probability of making the decision to continue education and choosing a more difficult educational route. Moreover, for previously mentioned reasons (paragraph 2.2.1 in this chapter), these negative academic results could be more important on the decision to drop-out in the case of pupils from less advantaged social classes. This could explain the higher propensity of children from these classes to abandon school at an earlier stage.

Another possibility is to refer to the academic experience of others, especially of people with the same social background, who have already faced these educational choices (Breen, Iannelli and Shavit, 1998). In this case, individuals can try to estimate their chances of success through the observation of the academic experience of those belonging to the same social class of origin. The academic experience of people from the same social class becomes a point of reference for the student's subjective beliefs.

Thus, the low proportions of people from working classes who in the past entered the higher levels of education and succeeded would reduce the propensity of successive generations from the same class of origin to take a longer educational career. It could be hypothesised that there is a "low-educational-attainment equilibrium", similar to the "low-skills equilibrium" described by Finegold and Soskice (1988) in the UK labour market. With the expression "low-skills equilibrium" Finegold and Soskice describe a situation in which young people poorly invest in education (low participation rates in post-16 training). Furthermore, companies, which do not find skilled labour forces, adapt to the situation, offering unskilled and semiskilled employment in a reinforcing behaviour pattern. Without

the introduction of incentives to invest more in education and to develop more high quality products none of the two parts has an interest in changing the situation. From these circumstances one derives the stable situation called "low-skills equilibrium".

In the "low-educational-attainment equilibrium" a similar reinforcing pattern of behaviour would act, this time involving different generations of the same social class. The low rates of entry and success at university level of the working class would reinforce in the following generations the belief that it is hard to succeed, thus discouraging the attractiveness of investing further in education.

5. Some hypotheses based on Rational Choice Theory

From the exposition of the economic and sociological literature two main questions can be asked in the Italian case:

1. Which are the rewards that a certain level of education ensures in terms of occupational benefits?
2. How likely is it, for different individuals (e.g. coming from different social classes), to reach successfully a given level of education?

The first question inspired by the economic approach assumes that the investment in human capital, in this case represented by education, determines an increase in the rate of returns for workers. It supposes a strong link among levels of educational attainment, occupational status, earnings and the risk of unemployment. More precisely, an increase in the level of education must correspond with an increase in occupational position and earnings and a decrease in the risk of unemployment. Despite the differences between Human Capital and Signaling Theories, both theories have the same implications for the Italian case: whether individuals obtain their occupational returns via human capital or via the signals it sends does not matter because the consequence is the same; that is, they invest in education when they expect to obtain an adequate return in the labour market.

In line with Becker's thought, we can say that in Italy a person, who rationally decides about his\her future, can discover that to be more educated does not advantage him\her in the competition for acquiring a job or a good wage

compared to those who reached a lower level of education. In this case to stay longer at school could be a loss of time and money if there are not clear future benefits.

Thus the third hypothesis which can explain low investments in education in Italy is: *In Italy people with a diploma or a university degree do not have significantly higher occupational returns compared to those who drop out of school earlier.*

The second question, related to the sociological literature of Rational Choice Theory, deals with the importance of another factor which enters into the process of evaluating the benefits associated with a certain educational outcome, that is subjective expectations of success (Breen and Goldthorpe, 1997).

As previously mentioned subjective expectations of school success can be estimated by reference to the past academic experience of the pupils themselves and to those of people who are "like them", that is coming from the same social and cultural background.

Past academic achievement is usually regarded as a signal of a pupil's ability and for this reason it is considered among the factors entering into the evaluation process of the subjective probability of success. A pupil's low achievement and failures favour the belief that he\she is not suitable for a longer educational career and will be at risk of future failures, so discouraging him\her of continuing education. Some studies in Italy (Istat, 1996, Abburra', 1997) have already pointed out the link existing between failures and the phenomenon of dropping-out: previous experiences of failure increase the likelihood of abandoning school. Moreover, pupils who come from lower classes have higher probabilities of failure and consequently a higher probability of abandoning school earlier.

In the estimation of the probability of educational success people can rely on the academic experience of those from the same social class. From the proportion of those "like them" who continued to the higher levels of education and succeeded they can try to estimate their own likelihood of school success. Thus, if the proportion of those who went on in education is particularly high and the proportion of them who succeeded is also high then they have good reasons to believe that they can also be successful. This phenomenon can also have the opposite effect: if the

proportion of those who abandon school or fail without reaching the higher levels of education are very high people can think that they do not have a high probability of succeeding.

In the Italian case this means that for a minority of people, presumably those from higher social classes, the probability of attending and succeeding at university are high. The majority of the other social classes have probably lower probabilities in both attendance and graduation and this discourages them from attending further education.

Thus the fourth and last hypothesis is: *In Italy subjective expectations of school success vary according to different social classes in a way that only a few students have a real incentive to reach higher educational levels, that is those coming from higher social classes.*

7. Conclusions

In this chapter two main theoretical approaches, Structuralism and Rational Choice Theory, were presented and, within their general framework, some more specific theories analysed. Starting from their main assumptions I developed some hypotheses for the Italian case which attempt to explain its low levels of educational attainment. Four are the main hypotheses that will be empirically tested in the next chapters: two refer to the constraining effect of social origin, education and labour market institutions; the other two refer to the occupational benefits an individual can gain from reaching different educational qualifications and to the subjective expectations of educational success. To summarise they are:

1. *The low levels of educational attainment in Italy are the consequence of the prevalence of vocational and technical education, which divert the majority of their students away from university education and depress the general level of success at upper secondary level.*

2. *In the economically underdeveloped Southern regions of Italy people are less educated than people in the North and this lowers the national educational attainment rates.*
3. *In Italy people with a diploma or a university degree do not have significantly higher occupational returns compared to those who drop out of school earlier.*
4. *In Italy subjective expectations of school success vary according to different social classes in a way that only a few students have a real incentive to reach higher educational levels, that is those coming from higher social classes.*

The following chapter deals with the methodology and data used in the empirical analyses and it contains some clarifications on the choices made during the course of this study.

CHAPTER III

RESEARCH DESIGN, METHODOLOGY AND DATA MEASUREMENT

1. Introduction

At the beginning of any empirical analysis there is the question about the methodological instruments which best meet the purposes of the research. Methodological choices are of fundamental importance because the research design, the variables chosen, as well as the way of measuring them, and the technique of analysis can strongly affect the final results.

The present research tries to throw light upon the effect of different factors on individual behaviour, which is represented by the individuals' educational decisions. This means that the level of analysis will be the micro level and the study of the influence of factors such as gender, social origin, geographical location, educational system, economic and social components on individual schooling attainment will be part of the research.

Moreover, the approach used in this dissertation is quantitative. Applying different statistical techniques of analysis and different statistical models, which have already been developed and used in sociology, I will test the hypotheses presented in the previous theoretical chapter and address the main questions of interest.

The following sections offer a detailed explanation of the methods used in the empirical chapters. Section 2 presents the research design underneath the empirical analyses. Part of the research design has been already spelt out during the formulation of the hypotheses. However, in order to properly interpret the empirical findings I will present it in a more extensive and ordered way. The following section (section 3) deals with the statistical techniques applied in the analyses. Section 4 presents a description of the data sources, both at the aggregate and the individual level. Finally section 5 describes the variables included in the models and their measurement.

2. Research design

The research design of this dissertation covers the Structuralist and the Rational Choice approaches which were presented in the previous chapter. Following the main assumptions of these theories and the hypotheses derived from them, three empirical parts have been developed.

The first empirical analysis (chapter IV) deals with the effect of ascriptive factors - gender, family background and cohort of birth - on the likelihood of continuing school at upper secondary level and of choosing one of the different tracks. It is done to discover whether there is a strong social selection in the Italian educational system which operates at secondary level and continues to have consequences at a later stage. I expect to find a persistent effect of social origin on the pupils' chances of continuing education after compulsory schooling and on their allocation into different types of upper secondary school. Academic schools would maintain their "selective" character, continuing to enrol a majority of their pupils from higher social classes, while the rest of schools, the vocationally and technically oriented schools, would attract the majority of the student population. This would not be without consequences: as stated in the first hypothesis, the fact that there is a prevalence in the attendance of non-academic tracks can reduce the chances of acquiring the final school-leaving diploma and of entering university. Thus, a second part of this first analysis measures the effect of attending one of the different tracks on subsequent educational outcomes. Due to data limitations it will not be possible to analyse the effect of attending vocational or academic tracks on the likelihood of succeeding at university. However, some descriptive data from the official statistics on university participation and graduation rates are presented.

The second empirical part, carried out in chapter V, is based on the Rational Choice Theory and is addressed to measuring the occupational returns to different levels of education. The hypothesis is that a large number of Italians do not make the decision to continue school and arrive at the university level because this choice

does not significantly enhance their occupational status compared to those who drop out earlier.

The analysis primarily regards the occupational returns to education in terms of occupational status. The dependent variable is respondents' first job prestige and the main explanatory variable is "education". Education is measured in two different ways according to the two types of analyses conducted.

The first part of the analysis focuses on the "marginal returns" to different educational levels (both attendance and attainment), that is, the additional returns that people gain in progressing from one educational level to the following one. Its aim is to discover whether attending and completing higher levels of education (upper secondary school and university) significantly increases respondents' occupational returns compared to having attended or completed the educational level immediately beneath them. The variable "education" is measured as respondents' last attended or completed educational level at the moment of entering the first job.

The second part of the analysis measures the "total returns" to different educational qualifications which means the total benefit that a person gains in reaching a certain school qualification. This analysis was introduced to study the returns to different types of upper secondary schools. Indeed, the data from the1985 Social Mobility Survey do not provide information on the type of school attended (vocational, technical or academic tracks) prior to the university degree. Thus making it impossible to measure the marginal returns to the attendance and attainment of different tracks for all students who went through them (including university graduates). To overcome this problem and examine whether there are significant differences in the returns to different diplomas the "total returns" analysis was added. In this case, education is measured as the respondents' highest educational certification obtained before entering the first job, with a distinction being made between diplomas from vocational, technical and academic schools.

Moreover, two models are always estimated: in the first, only the variable for "education" is introduced in the analysis to measure the gross effects of educational levels; in the second, the variable "social origin" (measured by the father's education

and occupational status), "gender" and "cohort" are added, and used as control variables, to measure the net effect of "education".

Due to the lack of information in the data set about individual earnings and the length of time spent waiting before entering the first job, an analysis was not carried out on the monetary returns to education and on the likelihood of being employed or unemployed after leaving school for less and more educated people. However, these issues are not neglected and some considerations, together with a presentation of previous research, are also added to the chapter.

The last part of this study deals with subjective expectations about future educational outcomes. As already pointed out, the idea behind the analysis is that individuals' educational decisions are affected not only by the expected occupational benefits, but also by their belief about how likely they are to succeed at school. Thus, the low rates of university graduation in Italy could be explained by different individual perceptions of the probability of success at this level. Taking as a point of reference the school experience of people coming from the same social background, pupils can infer their subjective probability of success. Thus, the proportion of people from different social classes who entered university and who, after entry, succeeded will be measured. This will offer indirect but useful information about individual expectations of educational success.

The last empirical analysis (chapter VI) focuses on territorial differences in educational attainment. The chapter analyses whether regional differences emerge in the continuation rates at each educational transition point and whether the influence of gender, social origin and birth-cohort on the above mentioned rates are related to the level of industrialisation. According to the fourth hypothesis, coming from the Thesis of Industrialism, Southerners should show lower propensity to continue education at the higher levels than Northerners, thus depressing the national attainment rates. The analysis will follow the lines of the first empirical chapter (chapter IV) but it will mainly focus on territorial differences. Thus, the effect of living in the North-west and in the North-east/Centre instead of the South of Italy on the likelihood of making the various educational transitions will be measured.

3. Analysis techniques

Every empirical analysis presented in the next chapters is introduced by some descriptive statistics which summarise the main characteristics of the sample of observations. Frequency distributions, crosstabulations and means are used for this purpose. Sometimes they are enriched by other data coming from the official statistics to better describe the context in which the individual decisions are taken. This is the case in the chapter on regional differences, where the rates of employment, unemployment and educational attainment from Eurostat and Istat data sources are reported. The aim is to draw a more general picture of the economic and educational differences among areas of the country and compare them with other European countries.

However, these descriptive statistics do not give information about the relationship between individual educational decisions and the hypothesised explanatory factors (such as sex, family of origin, place of residence, etc.). To this end, it is necessary to use a more sophisticated and complex statistical tool which allows the measuring of the strength and the direction of the effect of each explanatory factor on the dependent variable. The next sections present the two statistical techniques used in the empirical analyses.

3.1 The linear regression analysis

Ordinary least squares (OLS) regression analysis is one of the most common statistical technique used in social science. This is because sociologists are generally searching for a set of factors which can be considered the causes of a given social phenomenon or behaviour. Indeed, one of the most fundamental question usually asked is: which are the main determinants of the examined social phenomenon (or behaviour)?

The linear regression analysis does describe this kind of relationship between two variables (bivariate regression) or more variables (multiple regression) (Lewis-Beck, 1980).

This technique of analysis is applied in this dissertation to test the hypothesis derived from Human Capital Theory. The main assumption of this theory is that educational investment causes an increase in the rates of return in terms of earnings, occupational prestige and the likelihood of being employed. In the present work the rates of return will be measured by the occupational prestige of the first job which is represented by a scale of 93 categories of jobs ordered from the least prestigious to the most prestigious occupation. In the "marginal" returns analysis the baseline linear regression model of the occupational status attained (Y) on education can be written as follows:

$$(1)\ Y_j = a + b_{el}X_{jel} + b_{me}X_{jme} + b_{meq}X_{jmeq} + b_{ss}X_{jss} + b_{ssq}X_{jssq} + b_{un}X_{jun} + b_{unq}X_{junq} + e_j$$

This equation means that Y_j, the occupational status of person j, is determined by his\her education, represented by X_{jel}, X_{jme}, X_{jmeq}, X_{jss}, X_{jssq}, X_{jun}, X_{junq} plus an error term. More specifically, a is the coefficient for people with less than a primary qualification, X_{jel} is a qualification from *scuola elementare* (primary school), X_{jme} is *scuola media* (lower secondary school) attendance, X_{jmeq} is a *scuola media* qualification, X_{jss} is *scuola secondaria superiore* (upper secondary school) attendance, X_{jssq} is a diploma from *scuola secondaria superiore*, X_{jun} is *università* (university) attendance and X_{junq} is a *laurea* (university degree). The X values are dummies coded 1 in all educational levels an individual has attended and completed until the maximum level reached and 0 in all the other (higher) levels. In this way it is possible to study how occupational status is related to education and if the relationship is positive, in the sense that moving to a higher educational level leads to a higher amount of first job prestige compared to the previous educational level.

In the "total" returns analysis the baseline model is a little different because of the difference in the categories of education used - which are educational qualifications, with the distinction between different kinds of diplomas from upper secondary school - and in the codification of the variable "education". The equation is:

(2) $Y_j = a + b_{elq}X_{jelq} + b_{meq}X_{jmeq} + b_{stq}X_{stq} + b_{vq}X_{vq} + b_{tq}X_{tq} + b_{aq}X_{aq} + b_{unq}X_{junq} + e_j$

Also in this case a is the coefficient for people with less than a primary qualification and X_{jelq} is a primary school certification, X_{jmeq} is a lower secondary school qualification and X_{junq} is a university qualification. The other Xs refer to the different types of diploma from upper secondary school: X_{stq} is a shorter tracks qualification, X_{vq} is a vocational qualification, X_{tq} is a technical qualification and X_{aq} is an academic qualification. The X values are dummies coded 1 for the highest educational certification obtained and 0 in all the other categories.

The presented models are baseline models because they only estimate the gross effect of education on the respondents' first job prestige level. However, as previously mentioned, another model, which controls for the variable "social origin", "gender" and "cohort", so measuring the net effects of education, is added to the analysis.

The OLS regression analysis assumes that the relationship between the response variable and each of the explanatory variables included in the model is "linear" and the effect exerted by each of the explanatory variables on the response variable is "additive". However, there is another instrument, that of logit model analysis, that does not assume either linearity or additivity and solves the problem of having a dichotomous and non-continuous dependent variable. The next section deals with this different type of analysis.

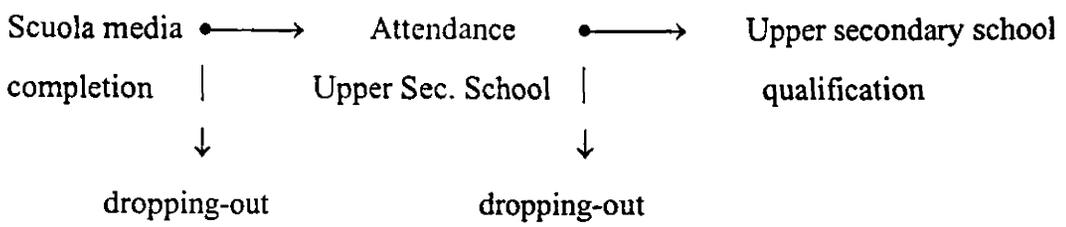
3.2 The Logit model analysis

The logit model analysis measures the probability of having or not having a certain status, such as continuing or leaving school, being employed or unemployed, voting for the right coalition or for the left one, and so on. The term "logit" means "the natural logarithm of the odds" and the "odds" is the ratio of the probability of falling into one of two categories of some variable of interest, and the probability of falling into the other (DeMaris, 1992). Although this model is similar to the

regression model, the solution is different because in this case it is expressed by the log odds, while in the other it is expressed by a metric dependent variable.

The model is used here to test the hypotheses concerning the Structuralist approach. The basic question is whether gender, social origin (measured by the father's education and occupation, mother's education and agriculture background) and geographical location - all considered as independent variables - influence the choice to continue or leave school, after the completion of compulsory schooling. The dependent variable is not the number of years of schooling or the highest level of educational attainment but the odds of making, or not making, a particular transition (figure 3.1).

Figure 3.1. Model of educational transitions: binary choice



Using the logit model, it is possible to measure the effects of the independent variables, simultaneously considered, on the log odds ratio of making a given choice. This model was first applied to educational careers by Mare (1981) and has been widely used in a number of studies on educational stratification (Gambetta, 1987; Shavit and Blossfeld, 1993). As Mare underlines, the advantage of using this kind of model resides in the independence of the parameters from the marginal distributions of the variables in the model. Mare shows that the contrasting results found in some research on educational stratification are due to the way the variable "education" is codified and to the methods used. He points out the limits of using the linear probability model of school continuation (Boudon, 1974) and the linear model of highest grade completed (among the others, Blau and Duncan, 1967). In both cases the linear models do not disentangle the effect of the marginal schooling

distribution from its association with social background. This creates a confusion when reading and interpreting the results in these studies which focus on changes in educational attainment. This is because they confound changes produced by variations in the effect of family background on schooling allocation with those produced by variations in the distribution of schooling. Instead, the logit model allows the analysis of the effect of social background on schooling continuation, independently from the average continuation rate (Mare, 1981, p.74).

For this reason in the present study Mare's model is adopted and the likelihood of progressing from one educational level to the following will be measured. In this case the logit model is used in a "conditional" form, which means it measures the probabilities of dropping-out after compulsory schooling, conditioning the model on the prior completion of *scuola media* (compulsory schooling). This indicates that the model considers only people who have finished compulsory schooling and excludes people with a lower level of education. At the same way, in the following transition, from upper secondary school attendance to upper secondary school diploma, the model measures the probability of dropping-out during upper secondary school, conditioned on prior entry to upper secondary school.

The equation for this analysis is:

$$\log \frac{P_{jk|}P_{jk-1}}{1-P_{jk|}P_{jk-1}} = \alpha + \beta_{coh}X_{j1} + \beta_{sex}X_{j1} + \beta_{med}X_{j2} + \beta_{fed}X_{j3} + \beta_{foc}X_{j4} + \beta_{ab}X_{j5} + \beta_{gl}X_{j6}$$

where k is the level of education.

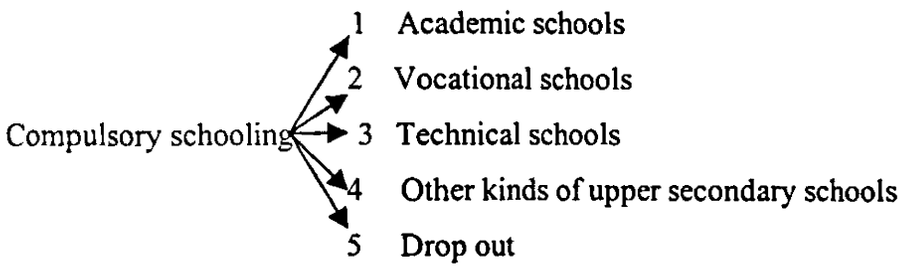
In this case, for person j, $P_{jk|}P_{jk-1}$ expresses the probability of continuing school, while $(1-P_{jk|}P_{jk-1})$ is the probability of dropping-out. Moreover, P_{jk-1} is equal to 1 because only those who completed (or attended) the previous level are included in the analysis. The log odds ratio of continuing school (k), relative to dropping-out, conditional on having already completed compulsory schooling (k-1), is a function of the independent variables represented by the X values. These are birth-cohort, sex, mother and father's education, father's occupation, agriculture

background and geographical location. The result will tell us if the independent variables considered in the model have a significant effect on the probabilities of going on versus dropping-out and if this effect is positively or negatively related to the dependent variable.

Another important issue related to the first hypothesis is about the role of tracking system in reproducing social inequalities. The existence of different tracks at upper secondary level in Italy induces one to build up a model which takes into account these "quantitatively" (referring to the length of schools) and "qualitatively" (referring to the characteristics of the training offered) different routes. At this point the educational choice is not binary. Instead of the choice of whether to continue to the next level or to drop out, there is now a multiple choice of whether to choose the academic track, the vocational track, another type of school, or drop-out. Breen and Jonsson (forthcoming) explains this point: Mare's model is a simple, unilinear sequential model of educational transitions which does not sufficiently take into account the structure of the educational system. To consider the variety of training offered by the educational system is an important issue for two main reasons. "First, given the choice of several educational options at a given point in the school career, class origin (or other) effects may well be stronger in shaping transition rates to one branch of study rather than another.....Secondly, given the existence of such differentiated options, the possibility arises that transition probabilities at a given choice point will depend upon the particular sequence of choices made up to that point" (p.8). To summarise, the effect of family background can be different according to different educational routes and the choice of a certain route can affect the following educational choices.

Thus, Breen and Jonsson further develop Mare's model substituting a multinomial logit model for the binomial logit proposed by Mare to take into account the diversity of academic routes taken by students (figure 3.2.).

Figure 3.2. Model of school transition: multiple choice



Applied to the Swedish educational system the multinomial logit model confirmed the authors' expectations: class origin effects on transition probabilities vary according to the choice of route made at a given transition point and the likelihood of making certain subsequent choices depend upon students' previous educational pathways. Moreover, the use of the multinomial model demonstrated that Mare's model tends to underestimate the effect of social origin at the first two educational transitions, from comprehensive school to secondary school attendance and from secondary attendance to secondary completion, and to overestimate it at the last transition, from secondary school completion to university.

In the Italian case the multinomial logit model is applied to measure the effect of social origin, among other factors, on individual educational decisions about the attendance of one of the different tracks. Thus, the previous equation becomes

$$\log (P_{jk}/P_{jK}) = \alpha_k + \beta_{ksex}X_{jk1} + \beta_{kmed}X_{jk2} + \beta_{kfed}X_{jk3} + \beta_{kfoc}X_{jk4} + \beta_{kab}X_{jk5} + \beta_{kgl}X_{jk6}$$

for k=1,....K-1

where the dependent variable is the choice of one type of the various tracks (indicated by the subscript k) versus dropping-out (K the omitted category).

4. Data sources

4.1 National-level data sources

Two types of data sources are used in this research. The first data group is represented by the official statistical publications which generally contain aggregate data. The data come from ISTAT, for Italy, these, when combined with the OECD and EUROSTAT collections, allow a comparison of Italy with the other European countries. They are useful for a descriptive analysis of the national educational attainment rates, their evolution over time, gender and regional differences, and the labour force conditions. In particular, in the Italian case, the data on education and labour market - such as educational attainment rates, employment and unemployment rates, in different economic sectors and different regions - are drawn from three annual ISTAT publications, the *Annuario Statistico Italiano*, *Rapporto Annuale* and *Forze di lavoro*. Two ISTAT monographs *La Selezione Scolastica nelle Scuole Superiori* and *Inserimento Professional del Laureati. Indagine 1995* have been particularly useful in furnishing information about the number of enrolled pupils and those obtaining an upper secondary school diploma and university degree. These two publications also provide data about failures and late completion at these two levels. Similar information also exist in OECD and EUROSTAT publications for the other European countries. This allows a comparative study of Italy at a first general level.

4.2 Individual-level data source

The second type of data sources used is represented by survey data. They contain individual data gathered for different purposes (in this case, for social mobility analysis) which usually include information about educational attainment, social origin, occupations, working conditions, earnings and so on.

All the empirical analyses presented in this dissertation use data from the Social Mobility Survey, carried out in Italy by Barbagli, Capecchi, Cobalti, de Lillo

and Schizzerotto, in 1985.[1] At the date of starting this work they were the only available data to conduct the kind of research until now described.[2] Indeed, I needed detailed information about individual characteristics (age and sex), education, place of residence, occupational situation and social background (parents' education and occupation) which are not easy to find in the same data collection.

The 1985 Social Mobility Survey gathered data on a nationally representative sample of 5,016 Italians, both male and female, aged from 18 to 65 years, in which a large range of information was collected including the variables mentioned above. These data allow an examination of the differences across observations, for example between various subgroups, such as men and women, age groups and areas of the country. Moreover, they offer some important information about respondents at different points in time - e.g. education before entering first job, further education after entering the labour market, place of residence at 14, father's occupation when respondent was 14 - which have been widely used in this dissertation.

Of course some other information are missing in the data set but this is the consequence of using data which were collected for other purposes instead of using data collected specifically for one's own research. I specifically refer to the lack of more detailed information about education: for example about the track attended at upper secondary level by university graduates[3] and the kind of studies taken at university, and to the complete absence of information regarding individual ability, individual earnings and the length of time spent looking for the first job.

5. Description and measurement of variables

In presenting the research design and the techniques of analysis the main variables considered in the next empirical chapters have been already mentioned and partly explained. However, some more specification needs to be added about the

[1] See Cobalti, A. and A. Schizzerotto (1994). *La Mobilità Sociale in Italia. L'Influenza dei Fattori di Diseguaglianza sul Destino Educativo, Professionale e Sociale dei Singoli nel nostro Paese.* Bologna. Il Mulino.

[2] The data from the 1985 Social Mobility Survey were kindly offered by Yossi Shavit.

[3] In the next paragraph the stratagem used to discover which kind of track university graduates attended is explained.

theoretical concepts behind them, their nature (discrete, continuous, categorical, dichotomous, etc.) and the measurement techniques used.

In relation to the type of analysis carried on, the following variables are used as dependent variables, explanatory variables and sometimes as control variables, in order to "screen out" all the possible influences that might explain the correlation in which we are mainly interested. This is the case of gender, social origin and birth-cohort which are studied as the main factors affecting individual educational transitions and introduced as control variables in the analysis of the occupational returns to education.[4]

5.1 Education

From the formulation of the main research question to the development of the hypotheses and research design, the key variable has been "education". In the present work, this term refers to the education offered and formally recognised, with the attribution of certifications, by the institutions (public and private) forming the school system. These institutions, from the time of the formalization of education, have assumed the responsibility of teaching general knowledge, socialising children, preparing them for adulthood, and for assuming essential roles within the work place and, more generally, within society. Moreover, the certifications obtained after having spent some years at school have become even more important for the acquisition of a job and for entering specific professions, such as those of engineer, doctor and lawyer.

Education provided by the school system can be measured in different ways: the numbers of years spent at school; the highest educational qualification reached; and the likelihood of making, or not making, the various educational transitions. In the chapters on the effect of tracking and of living in different areas of the country on the educational allocation process (respectively chapters V and VII), education is the dependent variable and it is measured as the likelihood of making the transition from one educational level to the next one (figures 3.1. and 3.2.). Apart from the

technical reason mentioned by Mare (see paragraph 3.2 of this chapter) there are other, equally important factors, which make this way of measuring education particularly advantageous. There are at least two reasons worth mentioning.

Firstly, through the application of the logit model of school transitions one can represent educational decisions as discrete events instead of continuous events (that is the number of years of schooling) in which the main question is not "how much" but "which" (Gambetta, 1987; Breen and Jonsson, forthcoming). This analysis allows a consideration of the differences in the educational options which are more often qualitative (different training contents) than quantitative (the length of schooling).

Secondly, the logit model of school transitions makes it possible to identify the main important educational points in which individual educational career is defined. In the usual models measuring education by the number of years spent at school each school year is evaluated and treated as the others. This contrasts with the logit model where it is possible to distinguish the year in which important decisions are taken, such as the year immediately after the end of compulsory schooling, from the other academic years (Gambetta, 1987).

An important feature of the school system studied in the present work is track allocation. Tracking can be defined as a sorting process whereby students are divided into categories and assigned to different groups (Oakes, 1985). The formation of these groups may be based on tests scores, ability, social class or other various categories. The Italian tracking system is based on the subjects of study, vocationally or academically oriented, and it is not related to the students' tests scores or ability. Thus, the term "tracking" in this dissertation refers to the allocation of students into different types of upper secondary school, which are "materially" (because they are located in different buildings) and "academically" (due to differences in their content) distinct.

[4] A list of all the independent variables used in the empirical analyses is presented in table 3.2. at the end of this chapter.

Tracking is introduced in the multinomial logit model as dependent variables and measured as the likelihood of going to one of the different tracks versus dropping out, after the completion of compulsory schooling.

When track placement is introduced into the analysis as an independent variable to study its effect on gaining the final school-leaving diploma, it is measured as a categorical variable, coded 1 for the shorter and less prestigious tracks (schools of 2, 3 or 4 years), 2 for vocational schools, 3 for technical schools and 4 for the academic track.

Education is also considered as an independent variable in the analysis of the occupational returns to education (chapter VI). In this case education is measured by the individual highest educational level and coded as a series of dummy variables (see the paragraph 3.1. in this chapter)

5.1 Gender

One of the most important individual characteristic which affects the educational decision is sex. In the past, women had on average lower levels of educational attainment than men. Today this is no longer the case, women have increased their chances of gaining the diploma from upper secondary school and obtaining a university degree. In this dissertation the variable "gender" is introduced into the analysis to see whether these increased chances means that all the barriers which precluded women from continuing education have been completely eliminated and whether some gender differences emerge in the choice of the type of upper secondary school.

The variable "gender" is measured as a dummy variable, coded with value 0 for men (the referent category) and value 1 for women.

Moreover, in the analysis of the occupational returns to education, two distinct models, one for men and another for women, are estimated to point out possible differences in the occupational benefits that the two sexes gain from investing in education.

5.2 Birth-Cohort

The variable "cohort" refers to the respondents' birth-cohort and it is used to measure variations in the chances of continuing studies, from one educational level to the next, among those born in different time periods. Two birth-cohorts are considered in the analysis about the role of tracking in the Italian school system: people born between 1930 and 1939 and those born between 1960 and 1965.

The choice of these two specific cohorts is mainly due to a technical reason. In the 1985 Social Mobility Survey there is only incomplete information about the respondents' educational training. The data report the respondents' highest certification and, in the case when they attended another school level without completing it, their last school attended. They do not contain information about the type of upper secondary school attended by university graduates. This lack is not without consequences because to use the multinomial logit model analysis of educational transitions we need the total number of respondents who entered different tracks, included those who went to university and graduated. The problem is solved using the 1930-39 and 1960-65 cohorts (a summary is presented in table 3.1.).

The oldest cohort, those born in the period 1930-39, went to school under the previous "élitist" educational system which was characterised by very differentiated educational paths. One path was addressed to working class children and provided a basic vocational training for an immediate entry into the labour market, but also precluded further education. The other path was mainly taken by upper class children and was aimed at preparing students for the higher educational levels and occupational positions. These latter students attended an academic course and, after having succeeded at the final examination, went to university. For this cohort we know that only graduates from the academic courses were allowed to go to university. Thus, by adding the university graduates to those who went to academic tracks, we can calculate the correct total number of people attending this kind of school.

Respondents born after the 1940s went trough a more open educational system where formal obstacles to continuing education were abolished. The reforms of the 1960s introduced unified compulsory schooling, which provided a general education equal for everybody, and liberalised access to university, thus allowing pupils coming from vocational and technical tracks to enter university. This means that for these later cohorts it is not possible to discover which type of upper secondary school the university graduates come from. However, for the cohort 1960-65, due to the young age of the respondents, only a few respondents have graduated from university and they can be excluded from the analysis without any bias in the results. The majority of those who went to university had not completed it at the moment of the interview and for them we know which kind of upper secondary school they attended.

These two cohorts, 1930-39 and 1960-65, are coded as two dummy variables with value 1 if respondents were born during that period and 0 if they were not.

Table 3.1. A summary of the individual educational opportunities under the pre- and post-reform period and a description of the stratagem used to discover which type of upper secondary school university graduates attended.

In the data there is information about the respondents' highest qualification and the last school attended without completing it, but no information about the type of upper secondary school attended by university graduates.	
COHORT 1930-39	Shorter tracks → No university entrance Vocational schools → No university entrance Technical schools → No university entrance Academic schools → University entrance
The number of university graduates is added to the number of those who gained an academic diploma.	
COHORT 1960-65	Shorter tracks → Some tracks, adding 1 or 2 years of schooling, allow university entrance; others no university entrance Vocational schools → university entrance Technical schools → university entrance Academic schools → university entrance
A few cases of university graduates are excluded from the analysis. For the university attenders it is known which kind of upper secondary school diploma they gained before attending university (their highest school qualification). According to their diploma, the number of university attenders is then added to the number of people who attended the various tracks.	

In the study on the returns to education three birth-cohorts are analysed: people born in the periods 1930-1939, 1940-1949 and 1950-1959. The decision to analyse people born in these specific decades has been taken to point out possible differences between those who were educated under the old educational system (cohort 1930-39) and those who experienced the school reforms of the 1960s (cohort 1950-59). The cohort 1940-49 was at school in a transitional period. People born during the 1960s are excluded from the analysis because at the moment of the interview they were too young to have had any working experience.

In the last empirical analysis about regional differences, four cohorts are considered: those born between 1930 and 1939, 1940 and 1949, 1950 and 1959, 1960 and 1965.

Also in these last two analyses the variable "cohort" is coded as dummy with value 1 if respondent belongs to that cohort and value 0 if he\she does not.

5.3 Social origin

The parents' education and the father's occupation are the variables which measure the effect of social origin on schooling attainment. The mother's and father's education are measured as ordered discrete variables and are constructed by imputing the number of years of schooling corresponding to their highest school qualification. Thus, following Shavit and Westerbeek (1998), 6 categories are considered: 0 years for "illiterate", 5 for "no-qualifications"; 6 for "elementary school certificate"; 9 for "middle school or vocational school leaving certificate"; 12 for "complete secondary education"; and 17 for "university degree".

The father's occupation is a continuous variable measured by reference to the De Lillo-Schizzerotto scale based of the social prestige of occupational stratification, with 93 occupational categories (see appendix 2). This scale was constructed by De Lillo and Schizzerotto (1985) according to the results of a survey in which respondents were asked to evaluate the social advantages associated with each occupation.

Moreover, in the Social Mobility Survey respondents reported about their father's occupation at two points in time: when they were 14 years old and their father's last occupation. The first information is particularly important and is used in the following empirical analyses. This is because the age 14, which corresponds to the end of the period of compulsory schooling, is a crucial stage for educational choices. It is the moment in which pupils decide whether to continue to upper secondary school, and decide which track to attend, or drop out. In taking these decisions the question of the opportunity costs of continuing education arises and the family economic resources - measured by father occupational position - may display their differentiating influence on the child's educational allocation.

To study the effect of social origin on schooling another variable has been added to those already described, which is "farm origin". The reason for this inclusion lies in the changes in the occupational structure which have occurred in Italy in the last decades (see chapter I, paragraph 3.2). There has been a consistent reduction in the number of people working in agriculture and an increase in the number of people working in the service and industrial sectors. Nowadays, having an agricultural background may have a different effect on educational attainment compared to the period in which a great part of the population was employed in this sector. Thus, "farm origin" is introduced in the analysis of educational transitions and coded as a dummy variable with value 1 if the father is a farmer.

The variable "social origin" is also introduced in chapter V when subjective expectations of educational success are studied but, in this case, it is measured with reference to father's social class position. According to a traditional approach, which has recently been subjected to strong criticism by feminists,[5] social class of origin is determined by the occupational position of the father. The scarce consideration of the mother's position in the labour market is justified by the fact that women usually participate in the labour market less than men and, when they do, they often occupy

[5] For an account of the critique against Goldthorpe's view see Dex, S. (1990) "Goldthorpe on Class and Gender: the Case Against" in J. Clark, C.Modgil and S. Modgil (editors) *John H. Goldthorpe. Consensus and Controversy.*

lower occupational positions (Goldthorpe, 1983). Furthermore, women are in precarious occupational conditions, for example in part-time or temporary jobs, more frequently than men, or, when they have equal occupational status, are paid less than men. Thus, even if the number of working women is growing over time the social position of the family is still mostly dependent upon men's occupation.

This point of view is adopted in this dissertation because the "male breadwinner" model is still the most common model in Italy. Even nowadays, a low percentage of women work in Italy (28.3%) and this percentage was much lower before. Thus, in the cohort born between 1930 and 1959, which is the cohort analysed in the section on subjective expectations of school success, one can validly assume that the respondents' social class of origin was mainly determined by the father's occupation.

The eight categories employed to measure social class of origin are taken from Cobalti and Schizzerotto's scale of individual occupational status (1994). Following a well established tradition, Cobalti and Schizzerotto define social class positions by reference to individual occupation. The notion of occupation adopted by them does not refer only to the technical roles but also to the social roles associated to each occupation (p.45). This aims to take into account, besides the specific tasks inherent in a certain job, the advantages (material and not) associated to it and the resulting position within the organisational hierarchy.

This schema of class positions is composed of eight occupational positions. These were formed by aggregating categories from the 93-category occupational prestige scale of De Lillo and Schizzerotto. These eight categories, which were grouped according to the occupational position and the economic sector of employment, are: entrepreneur, free profession, service class, white collar, urban petty bourgeois, agriculture petty bourgeois, urban working class and agriculture working class.[6]

[6] A full description of these eight categories is in A. Cobalti and A. Schizzerotto (1994) *La Mobilita' Sociale in Italia.* Bologna. Il Mulino

5.4 Place of residence

The large territorial differences (economic, social and cultural) characterising Italy has led to include the respondents' place of living among the explanatory variables of the low levels of educational attainment. According to Bagnasco's tripartition (1977), this variable was created by aggregating the provinces in which the respondents at 14 years old had their residence[7] into three categories. These categories correspond to the North-west, the North-east and Centre, and the South and Islands. Bagnasco's tripartition is particularly useful because it takes into account the economic and social characteristics which make some regions similar and others different. He overcomes the bipartition North\South, commonly used in the Italian literature on regional inequalities, and points out the growing importance of the "Third Italy" (North-east and Centre). This area is characterised by very successful small and medium enterprises.

Taking into account these regional differences is very important because people living in the three areas of the country can respond differently to the local economic context and accordingly decide to invest in education to a more or lesser extent.

Thus, the North-west, which includes Valle d'Aosta, Piemonte, Lombardia and Liguria, is dominated by large industries who had their golden period in the 1950s and 1960s but entered a crisis in the mid-70s. The North-east and Centre, constituted by Trentino-Alto Adige, Veneto, Friuli-Venezia Giulia, Emilia Romagna, Toscana, Marche and Umbria, is characterised by very specialised small- and medium-sized firms. These are well integrated in the local context and competitive in the international market. The South and Islands, including Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia and Sardegna, are marked by an underdeveloped economy, with a large part of the population

[7] The reason of taking the respondents' residence at 14 years old is the same as was mentioned for the father's occupation. The age of 14 is a key point for individual educational decisions, it is at this stage that people take the educational route (technical, vocational and academic) which will influence their chances of school success and their probability of continuing at university level.

employed in black market or temporary jobs and the others mainly employed in the public sector and services.

"Place of residence" is measured as two dummy variables: the first is coded 1 for the North-west and 0 for the South and Islands; the second is coded 1 for the North-east and Centre and 0 for South and Islands (in both variables the reference category).

5.5 Respondents' occupational status

In the analysis of the occupational returns to education the dependent variable is the respondents' occupational status measured by the prestige of their first job. Occupational status is not the only important outcome of labour force activity but it is a significant labour market outcome. Thus, the study of how much investing in education can increase the respondents' occupational status offers an important indication of the expected occupational benefits which individuals take into account in their educational decision process. As previously mentioned, the investment in education can lead to other occupational benefits, such as lower chances of being unemployed after leaving education or higher monetary returns, but the lack of information about these variables do not allow an analysis of these other labour market outcomes.

The respondents' first job prestige is measured by reference to the above described 93 categories of Cobalti and Schizzerotto' scale.

Table 3.2. List of the independent variables and their coding

Variable name	Coding
Female	0 = male 1 = female
Cohorts of birth (1930-39; 1940-49; 1950-59; 1960-65)	0=born in a different birth-cohort 1=born in the selected birth-cohort
Parents' education	0 years = illiterate 5 years = no-qualification 6 years = elementary school certificate 9 years = middle school leaving certificate 12 years = secondary school certificate 17 years = university degree
Father's occupation	De Lillo-Schizzerotto scale based on the social prestige of the occupational stratification: 93 occupational categories, from the least prestigious to the most prestigious job (appendix 2)
Farm origin	0 = non agricultural background 1 = agricultural background
Geographical location (place of residence at 14)	1 = North-west 2 = North-east and Centre 3 = South and Islands (reference category)
Track placement	1 = lower tracks (schools of 2, 3 and 4 years) 2 = vocational schools (Istituti Professionali) 3 = technical schools (Istituti Tecnici) 4 = academic schools (Licei) - reference category

CHAPTER IV

THE ROLE OF TRACKING IN THE EDUCATIONAL ALLOCATION PROCESS

1. Introduction

This chapter analyses the relationship between the ascriptive factors and the individual likelihood of making the transition from lower secondary school to upper secondary school and the choice of one of the different tracks. It also studies the changes occurred over time.

Many researchers have pointed out that the increase in the levels of school attendance is a common feature of modern societies. However, it is still largely debated whether the expansion of education has brought real equality of opportunity or has moved the inequality to a higher level. According to common thinking, equality in education is realised not only by granting everybody the opportunity of attending school but also by granting equal possibilities of success. This means eliminating the influence of the social, economic and cultural origins of pupils on the choice of continuing or abandoning school, on the choice of the kind of school attended, and on the educational and professional results achieved.

As introduced in chapter II, there are two theories which contrast with each other in this respect: the Thesis of Industrialism and the Social Reproduction Theories. The followers of the first theory (Treiman,1970; Kerr, Dunlop, Harbison and Myers, 1960/1973; Parsons in Grusky, 1994) suggest that modern societies have succeeded in equalising educational opportunities due to the affirmation of meritocratic models of educational and occupational allocation. In contrast, the Social Reproduction theorists (Collins, 1979; Bourdieu, 1977) argue that capitalist economies have reinforced the inequalities among social classes and the educational system plays a fundamental role in reproducing the class differences existing in society.

Some empirical research has shown that, even though in recent decades there has been a general increase in the educational attainment levels in all modern

societies, inequality of educational opportunities among people from different social classes has not disappeared (Shavit and Blossfeld 1993).

A large number of sociological and educational studies have analysed the role of educational structure, especially its tracking system, in the reproduction of social inequalities in education (Shavit 1983; Oakes 1985; Kerckhoff 1986; Gamoran and Mare 1989; Arum and Shavit 1995; Müller and Shavit 1995; Gamoran 1996). However, their empirical results and their conclusions often diverge.[1] Some found that the division of students into tracks maintains, or even widens, the existing social and cultural differences among students; others showed instead that the availability of vocational training reduces disparities because it offers to less advantaged students the opportunity to learn skills useful for finding a qualified job.

In Italy the analysis of the role of tracking in the stratification process in education has been neglected. The results presented here reveal that tracking is a critical factor for understanding how the process of social selection is perpetuated within the Italian school system. But more importantly for the purpose of this thesis, the results show that attending one track instead of another also has a significant effect on the chances of school success and continuation.

2. The research questions

In Italy, the role of ascriptive factors in influencing the opportunity of continuing school at different transition points has been the object of study by Cobalti and Schizzerotto in 1994 and by Shavit and Westerbeek in 1998. Both use the same data source (1985 Social Mobility Survey data) and methodology (logit model analysis). However, interestingly, they arrive at different interpretations of the results with respect to the persistence of inequalities in educational opportunities over time, and the role of the reforms in enabling educational expansion and reducing inequalities among the social classes.

[1] See chapter II for a detailed presentation of the results of the different empirical analyses on tracking.

The results of Cobalti and Schizzerotto's analysis showed that, over the generations and in all educational transitions, inequality of educational opportunity among different social classes has not declined (with the exception of the male children of the agricultural petite bourgeoisie).[2] They speak about a persistent "hierarchy" in the log-odds in which the top is occupied by the bourgeoisie and the middle class and the bottom by the agricultural working class. According to the authors, the only significant change in educational opportunity over time emerges in the decline of inequality between men and women.

Following in the footsteps of Cobalti and Schizzerotto's research, Shavit and Westerbeek did the same kind of analysis but introduced more detailed measures of social origin.[3] In contrast with Cobalti and Schizzerotto, their results show a decline, over time, in the effects of social origin (here mainly represented by the father's education) on the odds of *scuola media* completion and of entering upper secondary school. The reasons for this decline are attributed by the authors to a saturation effect[4] more than to the effect of the reform of the *scuola media*, which introduced a compulsory single type of lower secondary school for everybody. This is because the equalisation process began before the introduction of this reform.

The present chapter focuses on the effect of gender, social origin and place of residence on the likelihood of attending one of the different types of upper secondary school. In Italy the choice of the type of upper secondary school is considered "free" because it is left to pupils and their parents. However, the reality of this decision is more complex. If there is no compulsory track to follow after the completion of compulsory schooling (for example, based on the results of academic tests), the

[2] The reasons for this exception were found to reside in the particular economic and social situation of the agricultural petite bourgeoisie. In the last cohort they increased their continuation chances from elementary school to lower secondary school (like other children with an agricultural background) but the family resources, which are inherited and maintained by the sons of the families, continue to play a more important role than education in the acquisition of social position. Thus, once they end compulsory schooling they abandon school.

[3] Instead of the single variable "father's occupation", they considered the father's education and two kinds of measurement of father's occupation: one referring to a continuous prestige-like scale and the other to a categorical variable representing discrete social classes.

[4] When the participation rates at one level are satured for the most advantaged social classes (in the sense that they are 100%) a further expansion of education is associated with a real decline in the effect of social origins on equality of opportunity. Indeed, increasing the proportion of pupils from lower social classes attending that level reduces the gap among different social strata reduces until it disappears (Raftery and Hout, 1993).

choice of upper secondary school is influenced by teachers' evaluations. As pointed out in chapter II, one example in which teachers can influence this choice is when they write the report that all students receive at the end of the *scuola media*. In this report a clear proposal for the most "suitable" kind of school is given. In many cases this judgement can have a strong influence on the choice made.

From this premise two questions emerge:

1. Given that the phenomenon of dropping-out before the completion of compulsory schooling has almost disappeared and an increasing proportion of people continue to study, does social selection in education now occur mainly according to the choice of different types of upper secondary school?
2. Does the choice of a certain kind of upper secondary school (e.g. a technical education versus an academic education) have a significant influence on the successive educational outcomes of students?

To answer these questions the chapter is made up of a theoretical part and an empirical part. After a brief description of the Italian educational system and its historical evolution, the first part deals with the hypotheses that will be tested and the methodology used to do so. In the second part, the data from Barbagli, Capecchi, Cobalti, de Lillo and Schizzerotto's research on Social Mobility in Italy (1985) are analysed and interpreted.

3. The current structure of the Italian educational system

The present educational system is constituted by four cycles of education (Cobalti and Schizzerotto, 1994, 1998; Shavit and Westerbeek, 1998):

1. Pre-school education (*scuola materna*) for children aged from three to five, not compulsory, but attended by a large number of children (87%) from age three to five;
2. Compulsory schooling that lasts eight years, until the age of fourteen. It is composed of an elementary school (*scuola elementare*), lasting five years, and a lower secondary school (scuola media), lasting three years;

3. Upper secondary school (*scuola secondaria superiore*) is divided into different tracks: *licei* (classical, scientific and linguistic) lasting five years, which represent the academic courses; *istituti tecnici*, lasting five years, representing technical training; *istituti professionali*[5] lasting three years and with the possibility of another two years to gain a *diploma di maturità* (school-leaving certificate), which are the vocational tracks; *istituti magistrali* lasting four years (and one supplementary year to gain entrance to university), giving training in teaching, mainly attended by women; and *istituti artistici* lasting three years, with another two years to obtain the *diploma di maturità*;
4. University (*università*) from four to six years, according to the different disciplines. After university some post-graduate course opportunities are offered: in-service training centres (*scuole di specializzazione* or *corsi di perfezionamento*) and Ph.D. degrees (*dottorati di ricerca*).

All transitions from one school to another are marked by state examinations to obtain the school-leaving certificate and to pass to the next cycle of study.[6]

Some brief remarks need to be made to understand what governs an individual's access to different cycles of education and the choice of a course of study which suits the individual's aspirations and desires.

Compulsory schooling is the same for all students. Its short duration, from the age of 6 to 14 years, has characterised Italy negatively as the only country in the European Union with such a low school-leaving age. Only recently has the length of compulsory schooling been increased by one year until the age of 15.[7] Education provided during the eight years of compulsory schooling is general and does not aim to give any occupational training. In this way, decisions regarding the course a pupil's further education is likely to take, if indeed he or she wants to continue in full-time education, are deferred until the end of the *scuola media*.

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[5] Vocational schools ("corsi di formazione professionale") are also run, lasting two or three years, on a regional basis.

[6] A picture of the present structure of the Italian educational system is in Appendix 3.

[7] Pending a general restructuring of the different cycles of education (see the concluding chapter, paragraph 5.1.), this academic year the accomplishment of longer compulsory education has being realised through compulsory enrolment into the first year of one of the different types of upper secondary school.

After compulsory schooling, pupils can decide to attend one of the different upper-secondary school tracks. As mentioned previously, the choice of the type of upper secondary school is mainly left to pupils and their parents, who are, however, influenced by the teachers' judgements. Tracks differ from each other for their specific content, prestige and the future occupational destinations their students have access to. In spite of the variety of existing tracks there are three main branches of studies: academic, technical and vocational. The academic track has been from the beginning - that is, from the unification of the country - a highly prestigious track. Its content, very general and particularly "difficult", is aimed at preparing students for university studies and for future highly remunerative and prestigious occupations in the free professions and service class. Technical schools have a more specific content which provides training required for filling intermediate positions, such as lower-grade professionals, and employees in the administration, commerce and service sectors. Vocational tracks, a more recent creation (in the 1950s), are at the lower grade of the scale of school prestige. Their curriculum is also specific and labour market oriented but "easier" than that taught in the technical tracks. Their aim is to train students for future occupations as skilled manual workers, lower-grade technicians and employees in the executive staff of all economic branches (Dei, 1998).[8]

The common feature of all kinds of upper secondary school is the very inflexible curriculum, which means that pupils, having entered a particular track, cannot choose which subjects they want to study.[9]

There is not necessarily any connection between the kind of secondary school attended and the subject which is read at university. Thus, whatever kind of upper secondary school has been attended, students can decide freely on which the faculty to enter. The "openness" of the Italian university system is also reflected in the low costs of enrolment and in the possibility of staying at university for a longer period than the normal duration of the university course. Low university costs is the result of the universal conception of welfare state, which in Italy was only applied to

[8] In the 1950s and 1960s these tracks lasted only three years but in the 1969 reform (see next paragraph) a 5-year course was introduced for those who wanted to continue their studies and gain the possibility of enrolling into university.

education and health. In this view, the main financial contributor to educational expenses was the State, instead of the students. Only recently in the 1990s has there been a significant change. This change led to an increase in the financial contribution to university coming from students' fees. With the introduction of the principle of university autonomy the amount to charge students is now decided by the university, between an established maximum and minimum value, based on family income and the academic merits of the students (Baldacci and Inglese, 1997). Moreover, there is not any formal limit on the length of time a student takes to complete his\her course of studies. This has produced the well known phenomenon of *fuori corso* (students who are at university beyond the years necessary to complete their university program) and the problem of overcrowded universities.

4. The reforms of the 1960s

The present educational system is the result of two important educational reforms introduced in the 1960s:

1. the creation of a unified *scuola media inferiore* in 1962;
2. the opening up of access to university (initially exclusive to school-leavers from the *licei*) to include those with a diploma from technical, vocational and teacher-training schools (in these last two schools, adding respectively two and one supplementary year of study before university entrance) in 1961 and 1969.

Until these reforms, the Italian educational system had been run along the lines established by the Minister of Education, Gentile, during the period of fascism. The *Riforma Gentile*, in 1923, established a very élitist system with two different tracks of lower secondary education. There was an elementary school lasting five years, compulsory and equal for everybody. After this, the system was bipartite. The *scuola complementare* (substituted in 1932 by a *scuola di avviamento*) was, as the name suggests, a complement to elementary school, a "dead-end" school with no access to higher secondary education. It was a vocational training school, meant to facilitate entry into the labour market for the working classes but aimed also at

[9] See also chapter II, paragraph. 3.1.

obstructing their access to the highest levels of education. The *scuola media* was a "preparatory" school for the successive *scuola superiore*, catering mainly to the needs of the children of the upper classes. There was thus no single course of study but four different types of *scuole medie* to attend to gain access to different secondary schools. The *Riforma Gentile* also extended compulsory schooling to the age of 14 but this provision remained only "on paper". It was not really implemented until the reform of 1962 (Canestri, 1983).

The 1962 reform was very important because it marked a transition from the élitist system, described above, to a more egalitarian one. The aim of this act was the promotion of social cohesion and class integration through the abolition of the different tracks of lower secondary education and the introduction of a single type of *scuola media* for everybody. The *scuola media unica*, providing a general education, no longer differentiated according to different social origins, and was considered to be an enactment of the principle of equality of educational opportunity.[10]

In the same way, the reforms to liberalise access to university (in 1961 and 1969) were regarded as democratising the educational system. By eliminating the barriers to university entrance for pupils coming from vocational and technical tracks, these reforms aimed to reduce the discrimination operating against the lower class students who were mainly represented in these schools.[11]

Cobalti and Schizzerotto's research (1994) has demonstrated that this objective was not successful. While they recognise the positive effect of the rise of the average level of educational attainment and the halt in the increase of inequalities due to these reforms, they have found a persistent correlation between social origin and educational attainment.[12]

[10] One limit of this reform was that it did not pay attention to the economic aspect of the problem of equal opportunities; it thus did not provide any form of pecuniary aid for pupils from lower social classes.

[11] No reform at upper secondary level has been introduced at that time or later on. Many projects of reform were proposed and discussed but none of them achieved. Thus, the structure of this educational level has remained unaltered from the 1923 *Riforma Gentile*. However, the content of vocational and technical training was partly "academised" (made more general) to better prepare students for university studies.

[12] This conclusion does not reflect only an Italian experience. The already mentioned comparative research of Shavit and Blossfeld (1993) shows common trends in thirteen countries.

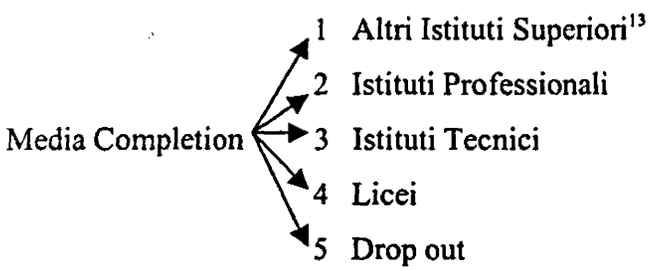
5. The hypotheses and methodology

The main objective of this chapter is the analysis of the effect of gender, social origin and place of residence on track placement and an analysis of the effect of track placement on subsequent educational outcomes. It tests the hypothesis that *the low levels of educational attainment in Italy are the consequence of the persisting "selective" character of the academic schools, which mainly attract children from higher social classes. While the majority of the student population attend vocational and technical education which diverts them away from university education and depresses the general level of success at upper secondary level.*

Are the *Licei* (the academically oriented upper secondary schools) "exclusive", with the *Istituti Professionali* and *Istituti Tecnici* (considered less prestigious tracks) attended by pupils from the less socio-economically advantaged classes? How does this affect educational attainment in Italy?

To answer these questions, first, the decision of whether to attend one kind of upper secondary school or to drop-out is analysed using a logit model in a conditional form (Mare 1981). More precisely, the odds ratio of choosing one of the different kinds of upper secondary school versus the choice of dropping-out, after completion of compulsory schooling, is estimated.

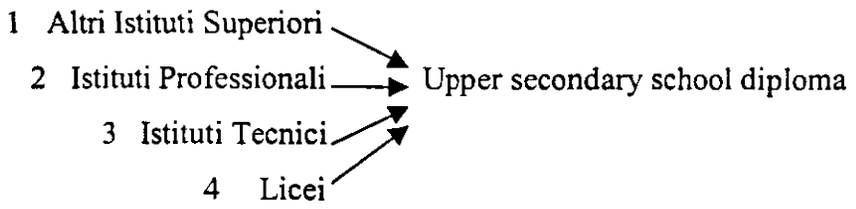
The pattern of this analysis is:



Second, the effect of track placement on successive educational results is measured. Thus, the kind of upper secondary school attended is introduced among

[13] Under the label *Altri Istituti Superiori* come *Istituti Magistrali, Istituti Professionali* lasting two or three years, *Istituti Artistici, ISEF* (*Istituti Superiori di Educazione Fisica*) and all other schools lasting less than five years (the duration of the main tracks).

the independent variables to measure its effect on the odds of acquiring the diploma. In this case the pattern takes the following form:



Finally, the rates of transition from different kinds of upper secondary school to university are measured.

5.1 Data and variables

From the 1985 Social Mobility Survey data a subsample composed of people born in two time periods, 1930-1939 and 1960-1965, was selected. The choice of these specific cohorts was dictated by the objective of pointing out possible changes over time but also of finding out which type of upper secondary school was attended by university graduates. As explained in chapter III (paragraph 5.2), the Social Mobility Survey asked respondents to report the highest certificate they obtained in the educational system and about the last school they attended, if they did not complete it. Thus a *laurea* (university degree) masks the type of upper secondary school attended except for those born before 1940. People in the birth-cohort 1930-1939 attended school before the reforms of the 1960s, when only graduates from the academic course were able to go to university. Instead, in the birth-cohort 1960-1965 almost the totality of university attenders were too young at the time of interview to have graduated, thus for them the type of diploma they gained from upper secondary school is known.

Regarding the variables, sex and cohort are used as dummy variables coded 0 for males and cohort 1930-39 and 1 for females and cohort 1960-65. The parents' education is measured by the imputed number of years of schooling, grouped into five categories (Shavit and Westerbeek, 1998): 0 years for "illiterate", 5 for "no-

qualifications"; 6 for "elementary school certificate"; 9 for "middle school or vocational school leaving certificate"; 12 for "complete secondary education"; and 17 for "university degree". Father's occupation is measured by reference to the De Lillo-Schizzerotto scale based on the social prestige of the occupational stratification (with 93 occupational categories). Farm origin is a dummy variable coded 1 if the father is a farmer. Geographical location is measured as a categorical variable, coded 1 for the North-West and 2 for the North-East and Centre, and 3 for the South and Islands (reference category). Track placement is also measured as a categorical variable, coded 1 for the lowest tracks (schools of 2, 3 or 4 years), 2 for vocational schools, 3 for technical schools and 4 for the academic track (the reference category).

The dependent variable is represented, in the first part of the analysis by the odds of choosing the different kinds of upper secondary school versus dropping-out; in the second part by the odds of acquiring the diploma versus dropping-out once track placement is introduced among the independent variables.

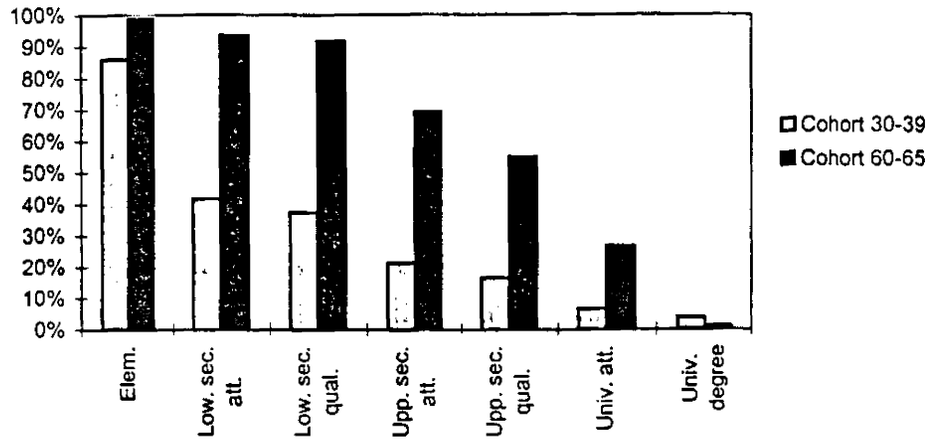
6. A descriptive analysis of the data

The two birth-cohorts under examination (1930-39 and 1960-65) consist of respectively 978 and 827 cases and are composed of men and women.

Looking at the proportion of people who went through different educational levels striking differences emerge between these two cohorts (figure 4.1.). From the first cohort to the second there is a general increase in the level of educational attainment. Most of the people born between 1930 and 1939 have abandoned school very early after having acquired an elementary school qualification. Of the total number of respondents who completed elementary school (86.0%), only less than half continued into lower secondary school. On the contrary almost 100% of the people born in the period 1960-65 have been to the elementary school and 93.6% attended the *scuola media*. Moreover, the majority of them (55.1%) acquired a diploma from upper secondary school while in the 1930-39 cohort only 16.6% arrived at this level. The major selection point in the younger cohort is at the end of

upper secondary school where almost half of the student population who gained a diploma did not enrol at university. However, more than one fourth of the cohort 1960-65 attended university compared to one in fifteen of the previous cohort.

Figure 4.1. Percentages of people in the subsample who attended and completed the different cycles of education, by cohort.



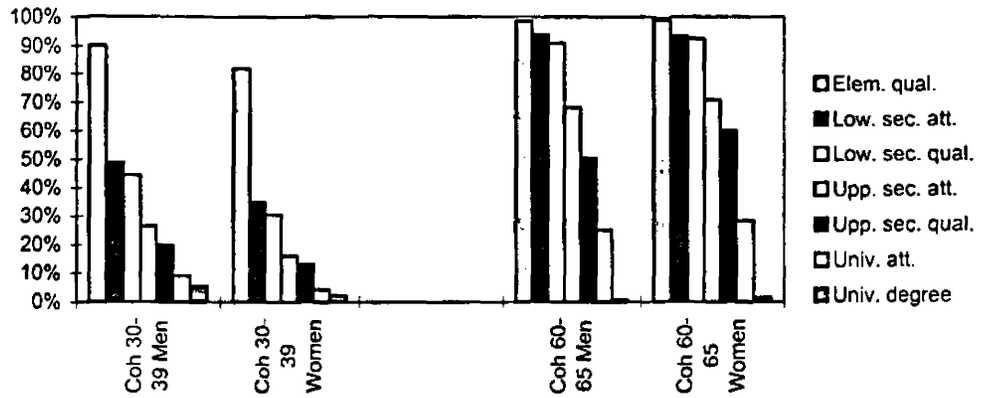
Note: The low percentage of university graduates in cohort 60-65 is due to the young age of respondents.

Gender differences are marked in the oldest cohort, with women being less highly educated than men (figure 4.2.). The proportion of women passing trough the various educational levels is always lower than the proportion of men. The most remarkable differences are at the two extremes: almost 20% of the female sample was illiterate, against 10% of men, while the percentage of women graduated at the university is less than half of the percentage of men.

The differences between men and women have almost completely disappeared, and can be said even to have reversed, as shown by the higher percentages of women of the youngest cohort at upper secondary and university level. Moreover, among those who attended upper secondary school, women were more successful than men, as testified by the higher percentage of women who acquired the diploma (85%) in comparison with men (74%).[14]

[14] The conditioned percentages of school success are presented in appendix 1, table A.4.1/A.4.2.

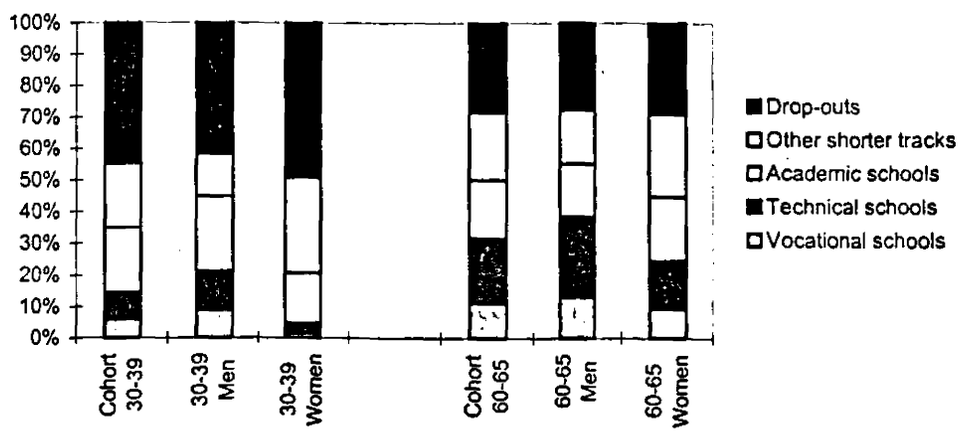
Figure 4.2. Percentages of people in the subsample who attended and completed the different cycles of education, by cohort and gender.



Note: The low percentage of university graduates in cohort 60-65 is due to the young age of respondents.

As regards the choice of the type of upper secondary school, the most highly attended schools are, in the first cohort, *Licei* and shorter tracks lasting two, three or four years (*Altri Istituti Superiori*), followed by *Istituti Tecnici* and *Istituti Professionali* (figure 4.3.). Women preferred attending shorter tracks (*Altri Istituti Superiori*) or *Licei*, while men attended *Licei*, *Altri Istituti Superiori* and *Istituti Tecnici*. The prevalence of women in *Altri Istituti Superiori* is due to the presence, in this category, of *Istituti Magistrali* (teacher training schools), typically considered as a "female" school track.

Figure 4.3. Attendance rates in different kinds of upper secondary school, by cohort and gender.



In the second cohort, the most widely chosen tracks are the shorter tracks followed by the technical tracks. The percentage of people in *Licei* has slightly declined, while the number of people in *Istituti Professionali* and *Istituti Tecnici* has increased considerably. Women outnumber their male counterparts in *Altri Istituti Superiori* (that is to say, in *Istituti Magistrali*), but the number of them attending *Istituti Professionali* and *Istituti Tecnici* has increased out of all proportion.

As regards the cultural and social background of respondents, in the majority of cases of the older cohort, the fathers and mothers of respondents have only five or six years of education. Few parents are more educated than this (table 4.1, column 1). In the younger cohort, the majority of parents have six or nine years of education but a greater number of them than in the first cohort also reaches higher levels (tab.4.1, column 2).

Table 4.1. Percentages of fathers and mothers with 0, 5, 6, 9, 12 and 17 years of education, by cohort

Years of parents' education	Cohort 30-39		Cohort 60-65	
0	Mother 14.6	Father 12.0	Mother 3.1	Father 3.1
5	38.8	34.7	14.7	11.6
6	39.1	39.3	53.9	46.7
9	4.4	7.2	16.0	19.6
12	2.9	5.0	10.2	13.1
17	0.2	1.8	2.1	5.8

Total number of cases: in cohort 30-39, there are 929 valid cases for mother's education and 901 for father's education; in cohort 60-65 there are 811 for mother's education and 807 for father's education.

The distribution of the pupils' educational attainment appears to be strictly correlated to their parents' education (table 4.2. and table 4.3.). In fact, the rates of graduation from upper secondary school and university are lower for people coming from less well-educated parents but they rise with the number of years of the parents' education. The only difference between the older and the younger cohort is the increasing proportion of the younger cohort who have completed *scuola media* and *scuola secondaria superiore.*

Table 4.2. Educational attainments by years of parents' education. Cohort 30-39.

Children's education	Years of parents' education cohort 30-39											
	0		5		6		9		12		17	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father
Illiterate	39.0	41.7	16.6	19.8	5.0	5.4	-	3.1	-	-	-	-
Elementary Qualification	52.2	53.7	60.6	63.3	43.5	47.2	17.1	23.1	3.7	6.7	-	-
LSS Qualification	6.6	4.6	15.4	13.4	27.8	29.4	21.9	18.4	18.5	13.3	-	6.3
USS Qualification	2.2	-	6.0	2.9	18.5	15.2	46.4	47.7	55.6	51.1	-	37.4
University Qualification	-	-	1.4	0.6	5.2	2.8	14.6	7.7	22.2	28.9	100	56.3

Total number of cases: 929 valid cases for mother's education and 901 for father's education.

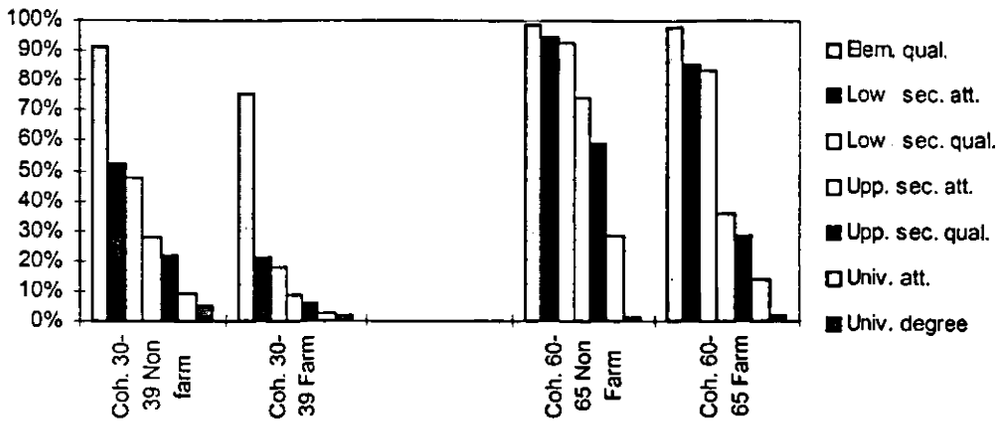
Table 4.3. Educational attainments by years of parents' education. Cohort 60-65.

Children's education	Years of parents' education cohort 60-65											
	0		5		6		9		12		17	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father
Illiterate	16.0	12.0	1.7	2.1	0.7	0.3	-	1.3	-	-	-	-
Elementary Qualification	28.0	28.0	16.0	22.3	6.9	6.9	1.5	1.9	-	0.9	-	-
LSS Qualification	52.0	56.0	53.8	54.3	36.2	40.6	21.5	22.8	6.0	12.3	-	2.1
USS Qualification	4.0	4.0	27.7	21.3	54.8	51.4	77.0	73.4	91.6	83.0	94.1	93.6
University Qualification	-	-	0.8*	-	1.4*	0.8*	-	0.6*	2.4*	3.8*	5.9*	4.3*

Total number of cases: 811 for mother's education and 807 for father's education.
* The low percentage of university graduates is due to the young age of respondents.

The data show a declining weight of the population with farming background over time which is explained by the recent industrialisation process of Italy. Indeed, in the oldest cohort (1930-39) 34.3% has a farming background while in the youngest (1960-65) this figure is only 12.5%. In the older generation the percentage of people with a farming background is strongly underrepresented at all educational levels (figure 4.4.). In the younger generation the gap between farming and non-farming origin declines at the lower educational level but it remains remarkable in the transition to upper secondary school. Only 43% of people from farming backgrounds who finished compulsory schooling went on to upper secondary school, versus 80% of others.

Figure 4.4. Percentages of individuals who attended and completed the different cycles of education, by cohort and farm origin.



Note: The low percentage of university graduates in cohort 60-65 is due to the young age of respondents.

7. The decision to enter one of the upper secondary school tracks

In this part of the chapter I analyse how gender, social origin and place of residence can affect pupils' track choices. The odds of choosing one of the upper secondary school tracks versus dropping-out is tested using a multinomial logit model analysis in a conditional form, which means that it is "conditioned" by the previous completion of the *scuola media*.

In table 4.4. the variable cohort shows a positive significant effect on the choice of *Istituti Professionali* and *Istituti Tecnici* versus dropping-out. Thus, being in the second cohort increases the odds ratio of entering the vocational and technical tracks versus leaving school, irrespective of the effect of the other independent variables. This result might indicate that people who in the first cohort were more likely to drop out are, in the youngest cohort, more inclined to continue school, choosing tracks considered as more oriented to the labour market. The question is therefore whether entering these tracks corresponds to a real increase of opportunity or to a way of maintaining social differentiation, precluding the lower social classes from an upward rise through the attendance of academic courses.

Tab.4.4. The choice of different tracks versus dropping-out, conditioned on media completion.

	Altri Istituti Superiori/ Out	Istituti Professionali/Out	Istituti Tecnici/ Out	Licei/ Out
Intercept	-3.61*** (0.72)	-7.16*** (1.31)	-5.46*** (0.99)	-5.68*** (0.82)
Cohort	0.97 (0.87)	3.46* (1.43)	2.66* (1.10)	-0.15 (1.00)
Female	0.18 (0.33)	-2.63** (0.84)	-2.35** (0.65)	-1.39** (0.41)
Mother's education	0.11 (0.09)	0.31* (0.14)	0.04 (0.12)	0.05 (0.09)
Father's education	0.20* (0.09)	0.14 (0.15)	0.53*** (0.12)	0.42*** (0.09)
Father's occupation	0.01 (0.01)	0.04* (0.02)	0.004 (0.01)	0.04** (0.01)
Farm origin	0.79 (0.42)	0.95 (0.77)	-0.94 (1.08)	0.32 (0.51)
North-West/South-Islands	0.17 (0.38)	1.48* (0.68)	0.32 (0.59)	-0.45 (0.34)
North-East and Centre/ South-Islands	-0.01 (0.40)	0.50 (0.83)	0.32 (0.62)	0.59 (0.41)
Cohort*female	0.22 (0.40)	2.05* (0.88)	1.92** (0.69)	1.61** (0.48)
Cohort*mother's education	0.06 (0.12)	-0.21 (0.17)	0.14 (0.14)	0.23 (0.12)
Cohort*father's education	-0.04 (0.11)	0.05 (0.17)	-0.38** (0.14)	-0.11 (0.12)
Cohort*father's occupation	-0.01 (0.01)	-0.02 (0.02)	0.01 (0.02)	-0.02 (0.01)
Cohort*farm origin	-1.61** (0.60)	-2.44* (1.08)	-0.65 (1.21)	-0.26 (0.68)
Cohort*North-West/South-Islands	0.17 (0.47)	-0.79 (0.77)	-0.81 (0.66)	-0.19 (0.58)
Cohort*North-East and Centre/ South-Islands	0.11 (0.65)	0.18 (0.90)	-0.20 (0.67)	-0.72 (0.52)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Total number of cases: 993.

The data show that the overall effect of social origin is strong in both cohorts: more educated parents and fathers with a higher occupational status have a positive effect in increasing the odds ratio of continuing school versus dropping-out, whatever the track considered. The only, but meaningful, change between cohorts is represented by the significant decreasing effect of father's education on the choice of *Istituti Tecnici* versus dropping-out. Indeed, in the second cohort a more educated

father continues to increase significantly the chance of choosing one of the different kinds of upper secondary school versus dropping-out, while in the case of the technical track this positive effect decreases. Considering that in the oldest cohort the effect of father's education was highly significant in increasing the opportunity to enter technical schools, as well as the academic schools, a loss of "exclusiveness" of the *Istituti Tecnici* emerges. The explanation is quite clear if this result is read together with the general rise in the odds of choosing the technical schools. In the more recent period, the increased chances of continuing studies, after having completed *scuola media*, are realised through the choice of *Istituti Tecnici* (together with *Istituti Professionali*). Thus, people who in the past were more likely to drop out, that is to say, pupils coming from disadvantaged social classes, today attend this track. The consequent result is a different "social characterization" of these schools: today a more mixed composition of students, that is students from different social classes, attend technical tracks.

In this context another important result also has to be considered: the positive effect of mother's education on the choice of entering *Licei* versus dropping-out increases in the second cohort. Considering the two cohorts separately it is possible to see that the positive effect of mother's education, non-significant in the first cohort, becomes highly significant (like father's education) in the second. This outcome shows that in the last cohort *Licei* has maintained, or even increased its exclusive character in comparison with *Istituti Tecnici*.

From the comparison between cohorts it emerges that, in the most recent cohort, the likelihood of women entering *Istituti Professionali*, *Istituti Tecnici* and *Licei* versus dropping-out, has increased significantly compared to men. In fact, in the first cohort, relative to these schools, women were always more likely to abandon school than men, and this difference was highly significant.

Over generations, the variable farm origin has changed significantly its effect on the choice of *Altri Istituti Superiori* and *Istituti Professionali* versus dropping-out. More precisely, in the second cohort people with a farm origin have more chances of dropping-out after compulsory schooling than entering these schools. This is also true for the *Istituti Tecnici* whose choice in both cohorts is negatively

influenced by this variable. The smaller number and the lower social status acquired in the youngest cohort by people with a farm origin are important pointers for understanding this last result. As previously shown, today this category of pupils is negatively selected at the point of transition from *scuola media* to *scuola secondaria superiore* (paragraph 6 of this chapter). According to the last result, their odds ratio of dropping-out is always higher than continuing whatever the track considered. The only exception is represented by *Licei*, which are not only the preferred track in comparison with the others but also the only schools to present a positive chance of being chosen rather than dropping-out. This indicates that the few survivors of pupils with farm origin are probably more motivated or more "able" to arrive at the higher levels of education. Concerning geographical differences, in the first cohort living in the North-west of Italy instead of the South\Islands is significant in increasing the odds ratio of entering *Istituti Professionali* versus dropping-out. Even if decreasing, this effect, in the second cohort, is very close to being significant. This shows a persistent preference of people living in the North-west for this kind of school.[15]

8. The role of track placement on the subsequent educational results

8.1 The school-leaving diploma

To measure the effect of track placement on the likelihood of upper secondary school completion the variable "track placement" has been introduced in the analysis among the independent variables. The effect of having attended *Altri Istituti Superiori*, *Istituti Professionali* and *Istituti Tecnici* versus *Licei* on the chances of acquiring a diploma has been estimated using the logit model in a conditional form (the condition was upper secondary school attendance).

This analysis has been also suggested by the recent results of ISTAT (1996), which illustrated the lower rates of success of people attending the vocational and

[15] The question of regional differences and the explanation for this finding about the higher likelihood of people living in the North-West attending vocational schools will be widely discussed in chapter VI.

technical tracks in comparison with people attending the academic ones. Is selection stronger in the lower tracks than in the higher ones, decreasing the chance of acquiring the school-leaving diploma?

The complexity of the model under examination - due to the small number of cases in each cohort and to the high correlation existing among some of the independent variables - induced the combining of the data of both cohorts and some caution over the introduction of the independent variables.

From the analysis of the effect of social origin, sex and place of residence it emerges that all the three variables are positive and highly significant; thus, being a woman instead of a man, having a higher educated father and living in the North-east and Centre rather than in the South of Italy increases the odds of gaining the school-leaving diploma (table 4.5, column 1). In this model the variables "mother's education" and "father's occupation" were omitted due to their high correlation with father's education, which caused an underestimation of the real effect of this last variable. Farm origin was left out too because it did not have a significant effect at this stage of educational transition. As previously shown, people from an agricultural background have already been strongly selected at the end of compulsory schooling, thus the small number of them who enter upper secondary school are more likely to successfully complete it.

Therefore, from the results of this first model the effect of social origin appears to be strong and to persist beyond the stage of entering upper secondary school.

The most notable finding comes in the second model in which the variable "track" is introduced among the independent variables to test its effect on the odds ratio of gaining the diploma (table 4.5, column 2). In accordance with expectations, attending the less prestigious tracks in comparison to the academic ones decreases the chances of successfully arriving at the final qualification. This confirms the ISTAT result that entering the less prestigious tracks instead of the academic tracks has a significant effect on the likelihood of acquiring the school-leaving diploma.

Table 4.5. The transition from upper secondary school attendance to diploma.

	From Upper Secondary School Attendance to Diploma			
Constant	-0.33 (0.31)	1.67** (0.52)	-0.37 (0.72)	1.81 (1.09)
Female	0.65** (0.19)	0.63** (0.21)	0.45 (0.41)	1.08* (0.51)
Father's education	0.14*** (0.03)	0.07* (0.03)	0.22** (0.07)	0.17 (0.09)
North-west/ South-Islands	-0.01 (0.21)	0.21 (0.23)	-0.86* (0.44)	-0.52 (0.49)
North-east and Centre/ South-Islands	0.81** (0.24)	0.83** (0.25)	0.66 (0.53)	0.63 (0.58)
Altri Istituti Superiori/ Licei		-1.94*** (0.37)		-2.94** (0.80)
Istituti Professionali/ Licei		-1.93*** (0.41)		-1.72 (0.92)
Istituti Tecnici/ Licei		-1.67*** (0.38)		-2.34** (0.87)
Cohort		0.09 (0.23)	0.08 (0.80)	-0.15 (1.25)
Cohort*female			0.22 (0.47)	-0.54 (0.56)
Cohort*father's education			-0.10 (0.08)	-0.12 (0.10)
Cohort*North-west/South-Islands			1.18* (0.51)	1.00 (0.56)
Cohort*North-east and Centre/ South-Islands			0.19 (0.59)	0.30 (0.65)
Cohort*Altri Istituti Superiori/ Licei				1.35 (0.91)
Cohort*Istituti Professionali/ Licei				-0.14 (1.03)
Cohort*Istituti Tecnici/ Licei				0.91 (0.97)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Total number of cases: 757.

The variable "cohort" does not have a significant effect which means that being in the second cohort does not change the odds ratio of gaining the diploma. The chances of successfully ending the upper secondary school are the same in both cohorts.

The effect of father's education continues to be significant but to a lesser extent than in the first model. The only plausible explanation is that the effect of social origin is mediated by track placement. Indeed, as previously pointed out, the choice of the kind of upper secondary school to attend is strongly affected by social origin, thus, the two variables are strongly correlated.

This is testified also by the last part of the analysis in which the interaction effects between cohort and the other independent variable are introduced in the model (table 4.5, columns 3 and 4). When the variable "track" is omitted from the analysis the effect of father's education is significant in the first cohort and it

remains unchanged in the second one. Indeed, in the first cohort pupils with a highly educated father are more likely to acquire the diploma instead of fail and the same occurs when the second cohort is considered (as demonstrated by the non-significance of the interaction effect between cohort and father's education). The introduction of the variable "track" and its interaction effect with cohort tend to hide the effect of social origin, e.g. the effect of father's education is no longer significant. This confirms that the highly significant effect of track placement incorporates the effect of social origin. Thus, attending *Altri Istituti Superiori* and *Istituti Tecnici* versus *Licei* has a highly significant negative effect on the probability of gaining the school-leaving certificate in both the first and the second cohort. The non-significance of the effect of the choice of *Istituti Professionali* could be the result of the small number of people attending this track as the high value of the standard error seems to testify.

8.2 University entry and completion

Does attending a vocational or technical track instead of an academic school affect university results? I suggest that the low level of university graduation in Italy may depend on the educational choices taken at upper secondary school level. The results presented above show that the vast majority of the student population today attend vocational and technical tracks. They are schools more oriented to the labour market than to university entry and this could lower the proportion of people who continue education.

The data on the continuation rates from each type of upper secondary school to university confirm this assertion. We know that in the older cohort (1930-39) university was open only to graduates from academic schools but in the younger cohort (1960-65) this is no more the case thanks to the reforms of the 1960s. In the first cohort more than 90% of graduates from academic tracks went to university, this percentage did not change in the second cohort, however a much smaller proportion of students from technical and vocational training made this transition (table 4.6.).

Table 4.6. Rates of university attendance, conditioned on having attended upper secondary school, by cohort and type of track.

Type of upper secondary school	Cohort 30-39	Cohort 60-65
Altri Istituti Superiori	-	16,4
Istituti Professionali	-	32,2
Istituti Tecnici	-	41,2
Licei	91,7%	92,4

Source: 1985 Social Mobility Survey.
N. of cases: 159 (for cohort 30-39); 431 (for cohort 60-65).

According to more recent Istat data (1996) almost 100% of graduates from *licei* go to university while the rates of transition of students from *Istituti Tecnici* is 60% and from *Istituti Professionali* it is much lower at 33.7%.

Despite the "openness" of the university system and the low costs associated with attendance (tuition is free, fees are low, student benefits are widespread, etc.), at the end of upper-secondary school a higher proportion of graduates from vocational and technical tracks than from academic schools do not go to university. It is hard to say whether this depends on the experiences in these schools, which discourage students from continuing education and attending university. Or whether it is the result of a choice taken much earlier at the moment of entering these tracks. In my opinion, it is very likely that there is a combination of "pushing" factors - the environment and curricula of these tracks induce students to leave school after the diploma - and "jumping" factors - the evaluation of occupational opportunities and family resources.

Moreover, the scarcity of alternatives to university education, such as vocational tertiary education (polytechnics), which can be considered a continuation of the training taken at upper secondary level, can also reduce the likelihood of attending further education. In many OECD countries people who decide to attend tertiary education have the opportunity of obtaining a post-secondary qualification which requires a shorter period of study and less effort than a university one. In Italy some shorter degrees (*lauree brevi*) at university and some post-secondary courses, run by the regions, have been introduced but they are still attended by a minority of students.

The easy accessibility of Italian universities creates a paradoxical situation: allowing all students coming from different tracks to enter (with the condition of having passed the maturity exam), it probably persuades the majority of students to choose vocational and technical schools as a less risky option. They acquire a more "marketable" qualification and leave open the possibility of continuing their studies at university afterwards. However, the final result is that universities mainly attract students emerging from the *licei*.

Unfortunately, the data in the Social Mobility Survey do not allow one to trace which secondary track the university graduates attended. However, according to the official statistics almost 50% of students from academic tracks succeeded at university in regular time (in contrast to *fuori corso*), a much higher percentage than the percentage of students from technical (14.7%) and vocational schools (8.7%) (Dei, 1996 p.271). Thus, not only are students from academic schools more likely to enter university but they are also more successful at this educational level than students from other tracks. We can speculate about the reasons for their success: they are more prepared, more motivated, or simply their advantaged social and cultural background still positively affects their educational outcomes. On the other hand, some students from vocational and technical schools enter university with no intention of graduating. When youth unemployment is high (which is the case in Italy) the opportunity costs of going to university are low: they spend time in the university waiting for a good job to come along.

9. Conclusions

The analysis of the role of tracking in the Italian educational system has led to very revealing results.

From the analysis of the two cohorts 1930-1939 and 1960-65 it emerges that there are many differences but also many elements which remain unchanged.

First of all, the rates of upper secondary school attendance increase in the second cohort, especially due to the growth in the proportion of pupils attending *Istituti Professionali* and *Istituti Tecnici*. The increasing preference for these two

kinds of education emerges not only from the descriptive data analysis but also from the logit model analysis in which the odds ratio of entering one of the different kinds of upper secondary school versus dropping-out is measured. This reveals that the increased importance of these tracks is due not only to the higher percentages of pupils who decide to attend them but also to the function that they seem to play as alternative to dropping-out. Indeed, people who in the first cohort were more likely to abandon school are, in the younger cohort, more likely to continue, choosing tracks which are considered to be more oriented towards the labour market.

Does entering these tracks correspond to an equalisation of educational opportunity?

According to the results presented here, the answer is negative. The first reason is the strong and stable effect of social origin on the choice of the kind of upper secondary school to attend. The second is the strong effect of tracking on acquiring the school-leaving diploma, which reinforces the social selection occurring at the point of entering upper secondary school.

Thus, today social differentiation occurs in two moments during the educational career: firstly, at the moment of transition to upper secondary school and, secondly, during upper secondary school attendance. Indeed, having more highly educated parents and fathers with a higher occupational status increases the odds ratio of continuing school after compulsory schooling versus dropping-out, whatever the track considered.

The only, but meaningful, change between cohorts is represented by the significant decreasing effect of father's education on the choice of *Istituti Tecnici* versus dropping-out. This result can be understood by taking into account what has been said above: over time the increased chances of continuing school at upper secondary level are realised through the choices of *Istituti Tecnici* and *Istituti Professionali*. Thus, pupils coming from lower social classes, who in the past were more likely to drop-out, today attend these tracks.

From the point of view of the theorists of the positive influence of tracking (Gambetta 1987; Arum and Shavit 1995; Müller and Shavit 1995) in enhancing the educational and economic opportunities of poor and minority groups, this could be a

confirmation of their assertions. However, the analysis of the effect of tracking on successive educational outcomes shows a contrasting reality: attending the less prestigious tracks instead of the academic ones significantly decreases the chances of successfully completing upper secondary school.

From these results, it is clear that pupils from lower classes do not have the same opportunities as pupils coming from the higher classes: they are less likely to choose the more prestigious upper secondary school tracks. Moreover, even if their probability of entering upper secondary school versus dropping-out through the attendance of *Istituti Tecnici* and *Istituti Professionali* has increased over time, they have lower chances of acquiring the school-leaving diploma than those who attend *Licei*. Furthermore, from the study of the percentages of people who made the transition from different tracks to university it emerges that, while the vast majority of students from academic tracks went to university, the other students did not. Thus, the selectivity of the academic tracks is reproduced at the university level.

These last considerations point out a change in selection times and selection methods over generations. While in the first cohort the higher social differentiation occurred at the level of compulsory schooling (Shavit and Westerbeek, 1998), today selection is delayed until the level of upper secondary school and, more precisely, at the moment of the choice of the kind of school to attend.

However, social selection does not stop at this stage but it also exercises an effect later, during the course of upper secondary school. As the highly significant effect of father's education on acquiring the diploma shows. Moreover, when the variable "track" is introduced as an independent variable, it becomes the most important factor in explaining the odds of success versus those of failure. In conclusion social origin continues to influence individual educational decisions mainly through the choice of attending one of the different tracks which in turn affects the chances of acquiring the school-leaving diploma (SES $\rightarrow$ Track $\rightarrow$ Diploma) and, at a later stage, the chances of going to university and gaining the degree.

If the results show that equality of educational opportunity does not seem be realised among pupils from different social classes, a divergent situation emerges

from the analysis of gender differences. These differences have almost disappeared or now appear to favour women. Women have significantly increased their odds ratio of entering the different kinds of high school versus dropping-out, and confirmed their already higher chances of successfully ending them, compared to men.

The thesis about the role of tracking in education, as a way of reinforcing the existing social stratification, cannot be rejected for Italy. The data show a clear influence of social origin on the choice of different kinds of high school. People from lower classes, who were previously selected by precluding from them the possibility of entering high school, are today primarily selected firstly through track placement. They are more likely to attend less prestigious tracks because these are considered "easier" and offer a final diploma which is more "exchangeable" on the labour market. Secondly, they are selected during the actual course of study - as demonstrated by their higher chances of failure than those of pupils attending the academic tracks. One could argue that the difficulties encountered by these students in completing their studies is the consequence of individual factors, such as low ability, more than institutional factors. A higher proportion of socially and culturally disadvantaged pupils attend these tracks and this affects the rates of success in these schools. Without ruling out this possibility (which cannot be tested in this dissertation), there is a remark to make: the predominant participation in vocationally-oriented tracks by lower social class students is not an Italian peculiarity. It is a feature common to other countries which have comparable rates of participation in vocational and academic tracks but higher educational attainment rates at upper secondary level, such as Germany and Austria.[16]

Finally, official statistics on the rates of transition from upper secondary school to university and the rates of university completion show that students from vocational and technical tracks are less likely to go to and succeed at university than students from academic tracks.

The conclusions drawn from this first empirical part cannot but highlight a persistently selective pattern of allocation in education in Italy.

To come back to my original and general question about the reasons for the lower rates of educational attainments in Italy, one explanation, in my opinion, comes out from the results presented here, and confirms the first hypothesis. In Italy there has been an increase in the proportion of people who enter upper secondary school through the expansion of vocational and technical schools. Thus, academic schools have maintained over time their "selectivity" and are still attended by a minority of students, who are mainly the children of the most advantaged social classes. The majority of the student population attends vocational and technical schools which, however, are the schools with the higher rates of failure. This tends to lower the national rates of educational attainment at upper secondary school level. Furthermore, the large numbers of students in the more oriented labour market tracks also has a negative effect on the university attainment rates. First, because students from vocational and technical tracks make the transition to university to a lesser extent than students from academic schools. Second, because among those who enter university only a few complete their studies and gain a university degree.

[16] See concluding chapter for a discussion on the present results in comparative perspective (section 3).

CHAPTER V

OCCUPATIONAL RETURNS TO EDUCATION

1. Introduction

The first empirical chapter on the role of tracking in the Italian educational system has pointed out the importance of track placement in the reproduction of social differences in education. It has also showed that the large increase in the attendance of vocational and technical schools has depressed the attainment rates at upper secondary and university level. The higher probability of failure and the lower probability of entering and succeeding at university of students from these tracks reduces the overall proportion of people with a diploma or a university degree.

This chapter applies the Rational Choice Theory to the Italian case. According to this theory the individual rationally chooses to leave or to continue education and to attend one kind of school instead of another on the basis of expected costs and benefits.

The question asked is: to what extent are individual educational choices in Italy influenced by occupational expectations in terms of earnings, occupational perspectives, risk of unemployment and, more generally, of private benefits?

The topic of the returns to education has been central in both the sociological and economic literature. In the economic approach the role of the economic factors (such as expected earnings and costs of training) are emphasised as the most powerful measures of the rate of returns to education (Becker, 1975). In the sociological approach the focus is not only on the subjects' response to labour market objective circumstances (mainly measured by the risk of being unemployed and by the probability of acquiring a higher occupational status) but also on subjects' intentionality and preferences and on their individual beliefs about being or not being successful in the academic environment (Gambetta, 1987; Breen and Goldthorpe, 1997).

The first hypothesis tested in this chapter is that *In Italy people with a diploma or a university degree do not have significantly higher occupational returns compared to those who drop out school earlier.*

The analysis of the returns to different educational levels on the prestige of first job does not support this hypothesis. In fact, the occupational returns to a diploma and especially university degree are high in Italy, even higher than in several other countries.

In Breen and Goldthorpe's perspective (1997) individual educational choices are influenced not only by the costs and benefits attached to different educational alternatives but also by subjective expectations of educational success. According to the authors, this last factor differs among pupils from different social backgrounds: it is higher in the case of middle class children, who have higher abilities, resources, and risks of social demotion, than in the case of working class children.

Based on this assumption the second hypothesis tested is: *In Italy subjective expectations of school success vary according to different social classes in a way that resulting in only a few students having a real incentive to reach higher educational levels, that is those coming from higher social classes.*

The data will show that, although in Italy the returns to university are high, the probability of entering and succeeding varies greatly among social classes. Only the most advantaged social classes have high values in both probabilities and this suggests that they are those who will be most likely to choose a university career.

2. Previous empirical research on the returns to education in Italy

In Italy the rate of returns to education, in terms of occupational status and earnings, has been the object of some empirical analyses by economists and sociologists.

In 1987 Antonelli and, in 1989, Cannari, Pelegrini and Sestito [1] carried out an empirical test of the Human Capital Theory in which their main finding was that in Italy the returns to education in terms of earnings are very limited. Antonelli showed that the

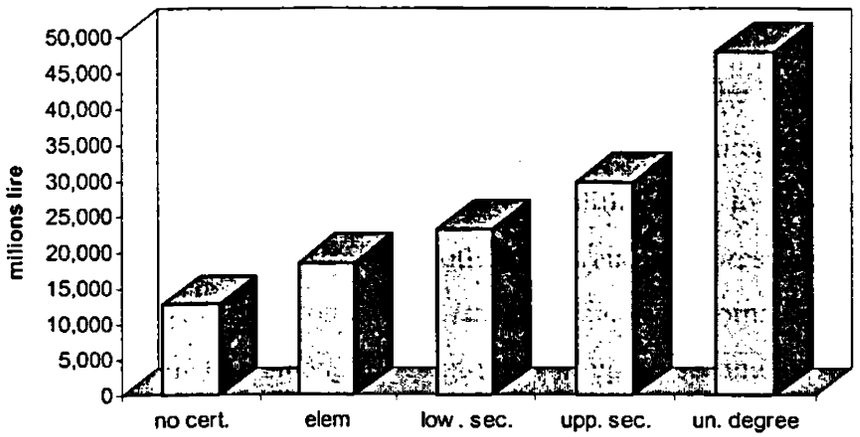
average rate of return to schooling (always measured by earnings) is lower in Italy than in other OECD countries (U.S., U.K. and Portugal). However, both studies stressed the differences existing among economic sectors. Cannari, Pellegrini and Sestito's study showed that in the Public Administration and Transport average earnings were higher than in the other economic sectors (such as industry, credit and commerce), while the marginal returns to education and work experience were low. This is explained by the authors as a consequence of the institutional mechanisms which traditionally discipline these two sectors and which tend to reduce the role of work experience and education (especially in relation to the time pattern of earnings). In Antonelli's analysis it emerged that working in the public sector - rather than in the private sector - has a positive impact on the earnings of less highly educated people and people beginning their working life. Conversely, work experience seems to play a more important role in the private sector, enhancing the economic returns of people with an advanced working career.

In more recent papers (Cannari and D'Alessio, 1995; Colussi, 1996), which used more recent data from the Bank of Italy's Survey of Household Income and Wealth, it has been found that the marginal monetary returns of an additional year of education is 7-7.6%, higher than that found in the previous research (4.6%).

In his book *Istruzione e Mercato*, Checchi (1999) points out that in Italy higher incomes are associated with higher educational levels (figure 5.1, data from the Bank of Italy, 1995). Moreover, increasing work experience the income gap between less educated and more educated people increases even more.

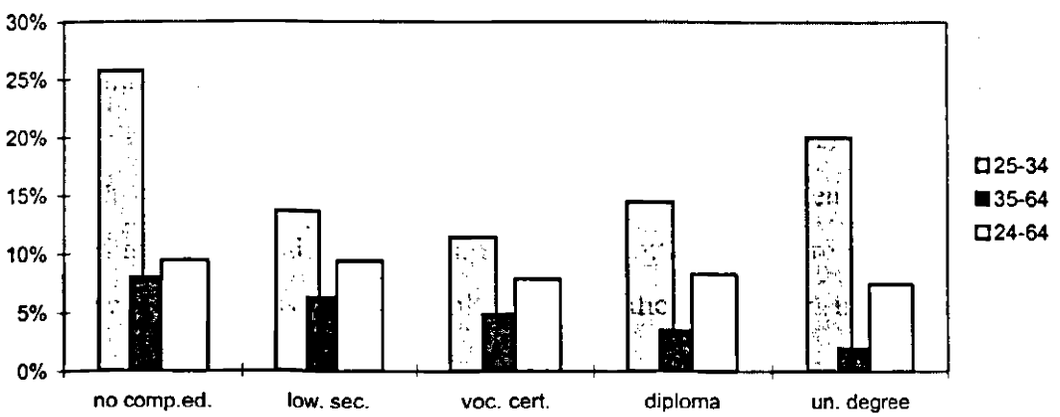
[1] In Antonelli's study three data sources are used: at the national level, ISTAT and Banca d'Italia; at the regional level, a sample survey related to the 1977 year, carried out in Emilia Romagna. In Cannari and others' work the data come from the Bank of Italy's 1986 Survey of Household Income and Wealth.

Figure 5.1. Individual income by level of education.



Checchi also shows that unemployment rates are lower for people with higher educational qualifications (figure 5.2; ISTAT data, 1997). However, even if for university graduates the probability of having a job is higher than others, they have very long waiting times before acquiring their first job (as testified by the high percentage of unemployed among the youngest age group).

Figure 5.2. Unemployment rate by age-groups and educational qualifications.



Using data from the Bank of Italy and a probit model, Flabbi (1999) estimated the probabilities of employment as function of individual educational attainment levels, while controlling for some individual characteristics, such as gender, place of residence, civil status and family background. He found that having a diploma from upper secondary school compared to elementary certification increases the probability of employment by 9.1%. Very surprisingly, always taking as a point of reference elementary certification, a university degree increases the chance of employment to a lesser extent, that is only 5.9%. Thus, in terms of probability of employment a diploma seems to have higher returns than a university degree.[2]

In another analysis, Flabbi (1999) used BdI data and an OLS model to measure the monetary returns to different levels of education. His results showed that having a diploma from upper secondary school or a university degree, compared to elementary qualification, increases individual earnings respectively by 40% and 50-70% (according to different types of university degree).[3]

In the sociological field, Schizzerotto and Cobalti (1998) have recently studied the link between educational qualifications and the class position of the first job. Analysing data from the 1985 Social Mobility Survey, provided by Barbagli, Capecchi, Cobalti, De Lillo and Schizzerotto in Italy, they found that there is a strong correspondence between levels of educational attainment and class position of the first job.[4] However, through OLS and ML regression methods of analysis, they showed that social origin also directly affects (even if to a limited extent) the class position of the first job and, more importantly, that social origin indirectly influences occupation via the strong effect that it exercises on educational attainment. They also studied the effect of education on employment status, Schizzerotto and Cobalti found that education does not significantly affect men's

[2] Flabbi does not mention whether he also controlled for the effect of "age". We know that young university graduates suffer of a high risk of unemployment. This could have biased the results if a large proportion of them is in the sample.

[3] The higher returns were associated with degrees in Economics and Law while the lower returns were associated with degrees in the Humanities.

[4] The only exception is represented by the chances of entering the petty-bourgeoisie class which is independent of level of education. The explanation of the authors is that means of production are a better resource than education in achieving low-level self-employment positions.

employment status while it has strong effect on women's employment status. More precisely, the higher risk of being unemployed is associated with less educated and young women.

Müller and Shavit (1998), in their comparative study[5] on the relationship between education and occupational outcomes, confirm Schizzerotto and Cobalti's findings. Italy (similarly to Germany) presents a strong and linear relationship between the levels of educational attainment and occupational status: the higher educational levels correspond to the most prestigious jobs. Moreover, Italy is the only country in this comparative analysis in which all qualifications above compulsory schooling, either vocational or general, have a positive effect, increasing the chances of acquiring a skilled job rather than an unskilled one.

The results of the presented economic and sociological research are rather contradictory: the research done in the 1980s showed low returns to education in terms of earnings (Antonelli, 1987; Cannari, Pelegrini and Sestito, 1989) while the most recent analyses point out higher returns (Cannari and D'Alessio, 1995; Colussi, 1996).[6] Moreover, the unemployment rate decreases with increasing levels of educational attainment; however for young people who have just graduated from university the unemployment rate is particularly high.

To summarise, from this overview two main results emerge:

1. In the long term it is clear that investing in education more than compensates for the period spent at school. A diploma from upper secondary school and a university degree ensure higher earnings and a lower probability of unemployment than lower educational qualifications.
2. In the short term the results are more contradictory: the occupational returns, measured as first job prestige, are higher for more educated people but their unemployment rates are also higher. This is because university graduates find it very difficult to enter the labour market.

[5] Italy was introduced along with thirteen other countries. The other countries were: Germany, France, Britain, Switzerland, Ireland, the Netherlands, Sweden, Israel, the Usa, Australia, Japan and Taiwan.

2. Research design and measurement

According to Rational Choice Theory - whether education increases human skills and productivity, as suggested by the Human Capital Theory, or it is regarded as a good indicator of a worker's ability, as proposed by the Signalling Theory - investment in education, with its relative costs, is worthwhile if it is rewarded in the labour market.

Previous research carried out in Italy (Schizzerotto and Cobalti, 1998) has analysed the returns to education by measuring the average total occupational returns to different educational attainments. The present study attempts to improve upon the previous studies in two respects. Firstly, it analyses the "marginal returns" to different educational levels, that is, the returns that the attendance or the attainment of a certain level of education adds to first job prestige, relative to the previous educational level (Van Der Ploeg, 1994, p.65). The idea is that in Italy the decision to drop out early during educational careers can be explained by the fact that people with a diploma or a university degree do not have significantly higher returns to their occupational status in comparison with those who have only compulsory schooling certification or less. Secondly, this "marginal returns" model allows us to examine whether there are additional returns not only in the attainment but also in the attendance of different educational levels. According to common belief, attending school in Italy without achieving the final school-leaving certificate is a waste of time because there is no formal recognition of the learning acquired during these school years (Gambetta 1987, pp.47-48).

Our data do not allow us to measure the marginal returns to different types of upper-secondary schools because they do not provide information on the school attended (vocational, technical or academic tracks) prior to the university degree. This means that this "marginal returns" model assumes a hierarchical educational system and ignores horizontal differences within the same educational level. Given the importance of distinguishing different tracks (see previous chapter), however, an examination of the

[6] The differences may be due to the use of different samples and methods of data analysis.

returns to these horizontal categories, the "total returns" model, has also been added to the analysis of the marginal returns.[7]

3.1 Data and variables

Using data from the 1985 Social Mobility Survey the analysis presented in this chapter is carried out on a subsample of people born between 1930 and 1959[8] who worked in the past or are working at present.

To highlight gender differences these data are also analysed separately for men and women, while to capture changes over time three birth-cohorts are considered: people born in 1930-1939, in 1940-1949 and in 1950-1959.

The investigations on both marginal and total returns are carried out using OLS regression analysis. Two models are always estimated, one for the gross effects of educational levels and another for the net effects, i.e. controlling for the variables "social origin" (measured by father's education and occupational status), "gender" and "cohort".

The dependent variable is the occupational status of the respondents' first job, measured by reference to the De Lillo-Schizzerotto scale (1985) based on the social prestige of occupational stratification (with 93 occupational categories, ordered from the least prestigious job which scores 1 to the most, which scores 93).

In the measurement of the marginal returns the independent variable is the respondents' last attended or completed educational level at the moment of entering the first job. Eight educational levels are considered: illiterate, primary certificate, lower secondary school attendance, lower-secondary school certificate, upper-secondary school attendance, upper-secondary school certificate, university attendance and university certificate. As previously mentioned, the decision to introduce among the independent variables school attendance aims to discover whether and to what extent the years spent at

[7] An analysis of the returns on respondents' last/present job prestige, has been also carried out. The results are not presented here because they do not substantially differ from those related to respondents' first job. This can be adequately explained by the low occupational mobility which characterises the Italian labour market. On this issue see Cobalti and Schizzerotto (1994).

[8] People born after this period are excluded from the analysis due to their youth. In fact, a few of them had working experience at the moment of the interview.

school without gaining the final school-leaving certificate affect job allocation in Italy. The respondents' educational levels are coded as dummy variables according to the following scheme:

	Dummies			Level of education				
	Illit	prim	lsec	lsecq	usec	usecq	un	unq
Illit	1	0	0	0	0	0	0	0
prim	1	1	0	0	0	0	0	0
lsec	1	1	1	0	0	0	0	0
lsecq	1	1	1	1	0	0	0	0
usec	1	1	1	1	1	0	0	0
useq	1	1	1	1	1	1	0	0
un	1	1	1	1	1	1	1	0
unq	1	1	1	1	1	1	1	1

Thus, the effect of each dummy variable on occupational attainment represents the advantage of having attended (or reached) the corresponding educational level as compared with the one immediately beneath it.

Among the independent variables "father's education" and "father's occupation", which are the control variables for social origin, and "gender" and "cohort" are also introduced. The 1985 Mobility study measured the father's education on a categorical scale consisting of the following categories: illiterate, no qualifications, elementary school certificate, lower secondary school, high school certificate, and university degree. As in the previous chapter, a number was assigned to each of these categories, a number which represents the mean number of school years for each level (Shavit and Westerbeek, 1998). A zero was assigned to "illiterate", 5 to "no-qualifications"; 6 to "elementary school certificate"; 9 to "middle school or vocational school leaving certificate"; 12 to "complete secondary education"; and 17 to "university degree".

Father's occupation, as well as respondents' occupation, is measured by reference to the De Lillo-Schizzerotto scale based on the social prestige of their occupational

stratification. In the analysis of the pooled data both the variables "gender" and "cohort" are used as dummy variables. For "gender" the referent category is male (which is coded with the value 0), while for "cohort" it is the oldest cohort (1930-39).

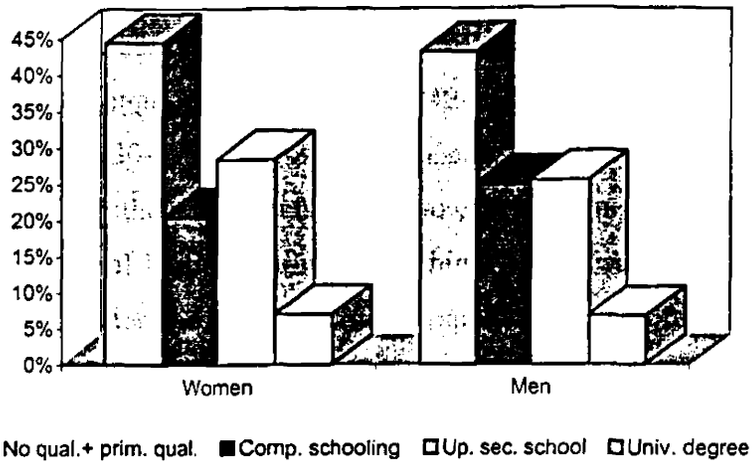
In the second analysis about the total returns, the independent variable is the respondents' highest school qualification obtained before entering the labour market; this is composed of seven categories: primary qualification, lower-secondary qualification, diploma from *Istituti Magistrali* and other short and less prestigious tracks, diploma from *Istituti Professionali* , diploma from *Istituti Tecnici*, diploma from *Licei*, and university degree. The distinction among different types of upper-secondary school qualifications has been included to ascertain whether differences in the returns exist not only between different educational levels (vertically) but also within the same level between different types of school (horizontally). The qualifications under examination are coded as dummies in which the value 1 is associated with the attainment of a certain qualification.

In this part of the analysis "social origin", "gender" and "cohort" are also introduced among the independent variables and used as previously described.

4. Some descriptive statistics

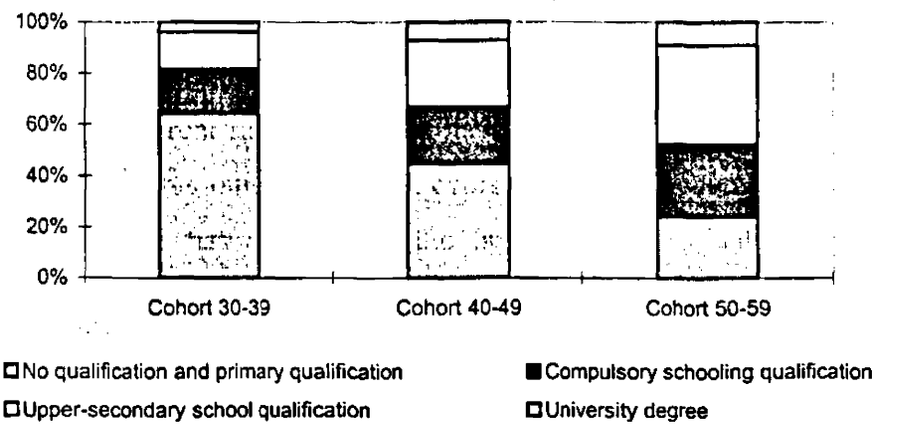
From the analysis of the distribution of educational levels in the overall subsample under examination (those born between 1930-59 who have worked or are working) it emerges that the majority of respondents had only a primary school qualification or less on entering their first job (figure 5.3.). Among women and men there are no relevant differences in educational attainments: the rates of attainments are higher for both sexes at primary school or less, closely followed by the rates for upper-secondary school certificates.

Figure 5.3. Educational attainment rates (cohort 1930-59) by gender.



This situation is due to the low levels of educational attainment of the first two cohorts (1930-39 and 1940-49) while in the younger cohort (1950-59) the majority had an upper-secondary school qualification (figure 5.4.). Indeed, from the first to the last cohort the proportion of respondents with only primary education decreases markedly whereas the proportion of those with lower-secondary, upper-secondary school and university education increases (upper secondary school graduates to a greater extent than the others).

Figure 5.4. Rates of educational attainments of individuals in the subsample, by cohort



Looking at the proportion of people who have been through the different educational levels (table 5.1.), it emerges that the largest selection occurred at the lower-secondary level: more than one third of the subsample stopped their educational career at the end of primary school. In addition, another third of those who continued on to lower-secondary school and gained the school-leaving certificate did not enter upper-secondary school.

Table 5.1. Percentages of individuals in the subsample who attended and completed the different cycles of education, by cohort and by sex (the percentages conditioned on having attended or completed the preceding one is in parentheses).

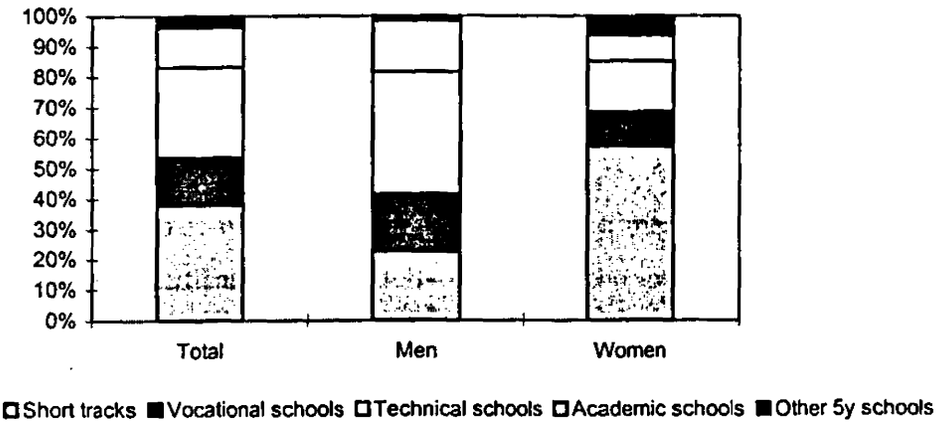
Educational levels	Total	Women	Men
Less then elementary qualification	100	100	100
Elementary qualification	92.0 (92.2)	91.6 (91.7)	92.3 (92.5)
Lower secondary school attendance	58.8 (64.0)	58.2 (63.6)	59.3 (64.3)
Lower secondary school qualification	56.5 (96.0)	55.7 (95.6)	57.0 (96.2)
Upper-secondary school attendance	37.4 (66.3)	37.8 (67.9)	37.1 (65.2)
Upper-secondary school qualification	33.5 (88.0)	35.3 (91.7)	32.2 (85.4)
University attendance	10.2 (31.3)	9.5 (27.7)	10.6 (34.0)
University degree	6.8 (65.8)	6.9 (72.3)	6.7 (61.6)

Total number of cases: 2511

Women appear to have been more successful at the level of upper-secondary and tertiary education: the proportion who achieved a final qualification after having entered these levels (91.7% for diploma and 72.3% for degree) is higher than that of men (85.4% and 61.6%). In the case of university graduates, the conditional probability of gaining the degree is higher than men's; however, fewer women than men enter, so it can be posited that the women who go to university are a more highly selected group.

Among the different types of upper-secondary school, a large number of respondents gained their certificates at the end of the shorter and less prestigious tracks, while a lower number gained this qualification from the technical, vocational and academic tracks (figure 5.5.).

Figure 5.5. Percentages of individuals in the subsample gaining different types of upper secondary school certificate, by gender.



The gender differences in this case are striking, testifying to the different school choices made between men and women. 57.2% of women with an upper-secondary school certificate went to the shorter tracks, contrasting with only 22.6% of men. As was already pointed out, this female over-representation in the shorter tracks is explained by the inclusion in this category of *Istituti Magistrali* (teaching-training schools), which are mainly attended by women. Instead, the majority of men qualifying at upper-secondary level (40%) preferred technical schools.

As previously pointed out, over time there has been a general expansion in education (figure 5.4.). As more people progress to higher levels of education so the main selection point changes over time (table 5.2.). Looking at the proportion of each cohort leaving at different educational stages,[9] it is clear that, in the oldest cohort, the most important selection point is that between elementary and lower-secondary school (45% drop-out rate). While in the youngest cohort, it is between upper-secondary school and university (34.1%).

[9] This proportion is computed by subtracting from the total percentage of those who completed or attended a certain educational level the percentage of those who made the transition to the next educational level.

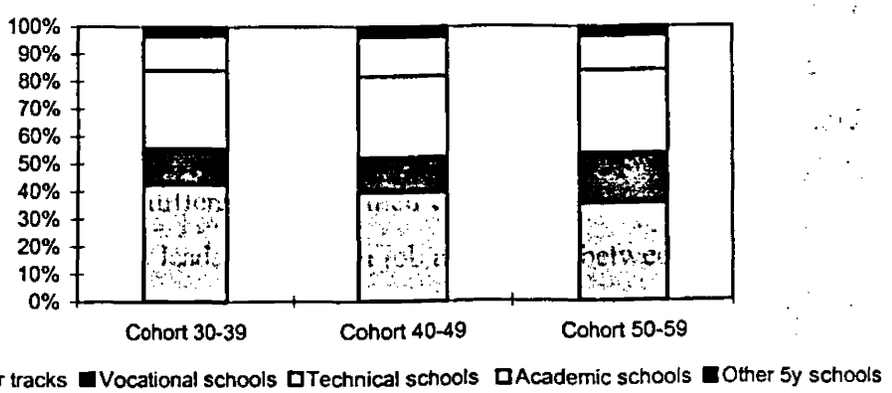
Table 5.2. Percentages of individuals in the subsample who attended and completed the different cycles of education, by cohort (the percentages conditioned on having attended or completed the preceding one is in parentheses).

Educational levels	Cohort 30-39	Cohort 40-49	Cohort 50-59
Less than elementary qualification	100	100	100
Elementary qualification	84.8 (85.0)	94.0 (94.1)	96.4 (96.9)
Lower secondary school attendance	39.8 (47.0)	57.0 (60.7)	77.9 (80.9)
Lower secondary school qualification	36.1 (90.8)	55.4 (97.2)	75.9 (97.5)
Upper-secondary school attendance	20.8 (57.7)	36.4 (65.8)	53.4 (70.5)
Upper-secondary school qualification	18.3 (84.8)	33.1 (89.6)	47.7 (88.1)
University attendance	5.2 (30.0)	11.1 (34.2)	13.6 (29.7)
University degree	3.9 (73.8)	7.1 (63.9)	9.1 (64.5)

Number of cases: 787 in cohort 30-39; 867 in cohort 40-49 and 857 in cohort 50-59.

Moreover, the percentages of people attending different tracks changed across cohorts (figure 5.6.). There is a decline in the percentage of diploma holders from shorter tracks and an increase in the percentage of people with a vocational school certificate. The rate of graduation from technical schools slightly increases from the oldest to the youngest cohort and the percentage of those with a diploma from academic schools remains relatively stable.

Figure 5.6. Percentages of individuals in the subsample gaining different types of upper secondary school certificate, by cohort.



Over time the number of university attenders and graduates has increased overall, even if the conditioned rate of transition from upper-secondary school to university has declined between the second and the last cohort (table 5.2.).

Finally, table 5.3. reports the mean and standard deviation of respondents' occupational prestige and of father's occupational prestige and years of education. Noteworthy is the increase over time in respondents' occupational prestige, which can be explained by the general expansion of education.

Table 5.3. Means of respondents' occupational prestige (first job), of father's occupational prestige and years of education (standard deviation is in parentheses).

	Respondents' occupational prestige	Father's occupational prestige	Father's years of education
Cohort 30-39	24.96 (23.40)	27.59 (20.24)	5.65 (2.98)
Cohort 40-49	28.65 (24.85)	28.46 (22.62)	6.26 (3.01)
Cohort 50-59	29.66 (25.30)	28.19 (22.28)	6.71 (3.16)
All cohorts together	27.84 (24.63)	28.10 (21.80)	6.23 (3.08)
	W 27.08 (24.81)		
	M 28.38 (24.50)		

5. The analysis of the occupational returns to education

5.1 The marginal returns

From the analysis of the marginal returns to different educational levels (table 5.4.) it emerges that the attendance and attainment of school levels higher than lower-secondary school significantly increases respondents' first job prestige. In other words, people who gain their upper-secondary school diploma, attend university and graduate have significantly higher returns on their occupational status than those who stopped at the preceding educational levels - respectively, upper-secondary school attendance, diploma and university attendance.

Table 5.4. OLS regression coefficients (marginal returns of educational categories) of first job scores (standard error is in parentheses), by gender.

Educational levels	ALL COHORTS (30-39, 40-49, 50-59)					
	WOMEN		MEN		POOLED	
	Model 1	Model 2[a]	Model 1	Model 2[a]	Model 1	Model 2[a]
Constant (illiterate or no qualification)	11.367***	9.133***	13.627***	10.117***	15.019***	10.446***
	(1.824)	(2.221)	(1.675)	(1.849)	(1.291)	(1.447)
Primary certificate	0.825	-0.238	2.186	1.163	2.310	0.678
	(2.038)	(2.284)	(1.856)	(1.920)	(1.361)	(1.467)
Lower secondary school attendance	4.695	4.943	1.701	1.073	3.288	2.622
	(3.399)	(3.518)	(3.162)	(3.144)	(2.288)	(2.344)
Lower secondary school certificate	2.930	2.739	3.227	3.343	4.238	3.015
	(3.503)	(3.627)	(3.227)	(3.220)	(2.349)	(2.407)
Upper-secondary school attendance	4.834	2.137	3.604	4.626*	4.443*	3.919
	(3.561)	(4.097)	(2.312)	(2.325)	(1.899)	(2.016)
Upper-secondary school certificate	18.763***	20.002***	18.807***	15.204***	19.215***	17.001***
	(3.494)	(4.015)	(2.295)	(2.314)	(1.871)	(1.989)
University attendance	7.852*	4.280	11.406***	11.522***	10.027***	8.955***
	(3.494)	(3.512)	(2.529)	(2.495)	(2.009)	(2.028)
University certificate	20.196***	20.429***	18.703***	12.517***	18.917***	15.526***
	(3.887)	(3.879)	(2.927)	(2.871)	(2.290)	(2.296)
Father's education		0.689**		0.462*		0.537**
		(0.251)		(0.197)		(0.154)
Father's occupation		0.111**		0.241***		0.186***
		(0.032)		(0.027)		(0.020)
Female					-1.522*	-1.718*
					(0.695)	(0.731)
Cohort 40-49		-1.998		-2.717*	-2.563**	-2.477**
		(1.459)		(1.170)	(0.859)	(0.911)
Cohort 50-59		-6.566***		-6.600***	-7.418***	-6.431***
		(1.516)		(1.221)	(0.899)	(0.9749)
R square (adj.)	0.529	0.559	0.485	0.555	0.517	0.555

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Total number of cases: 1049 (906 in model 2) women and 1462 (1274 in model 2) men.
[a]Model 2 controls for social origin and cohort.

Being a woman reduces the first job prestige compared to men, although the marginal returns to upper-secondary school and university qualification are higher for women than for men. This means that, in comparison with men, women on average enter less prestigious jobs but the most highly educated of them tend to fill better occupational positions. The reason for this can be found in the different occupational allocations of men and women. Müller and Shavit (1998) point out that women are less likely than men to be employed in blue collar occupations and are more likely to be in white collar occupations. These last occupations have higher scores than the former in the scale of job prestige and this could account for the difference in returns to the same educational qualifications between men and women.

Finally, it emerges that both "social origin" and "cohort" significantly affects respondents' first job prestige but in opposite ways. Having a father with higher education or occupational status, once education is controlled for, significantly increases first job prestige. While belonging to the second (1940-49) or third cohort (1950-59), compared to the first cohort (1930-39), reduces first job prestige. Controlling for social origin has a depressing effect on the coefficients related to education; nevertheless, the marginal returns to higher educational levels continue to be highly significant. This shows the advantages more highly educated people have when applying for more prestigious occupational positions. The negative cohort effect comes about because there is an interaction between cohort and the various education dummies. The pattern is that those with no qualifications become worse off in the younger cohorts, relative to those with qualifications.

The analysis of the marginal returns to education in different birth cohorts (table 5.5.) confirms the results presented above. That is, making the transition to upper-secondary school diploma, university attendance and university degree significantly increases respondents' first job prestige relative to the previous educational level and this is true in all cohorts considered.

However, some changes have occurred over time. The marginal returns to upper-secondary school attendance become significant from cohort 1930-39 to cohort 1940-49. While afterwards they decline sharply and are no longer significant. In recent times, those who have attended upper-secondary school without gaining the final diploma, compared to those with only a compulsory schooling certificate, have an insignificantly higher level of first job prestige. Furthermore, in the younger cohort the marginal returns to upper-secondary school certificate, university attendance and university degree increase. This testifies to the current rise in the importance of higher educational levels in achieving a prestigious job. This outcome can be explained by the general expansion of educational attainments which has occurred in the last few decades, which might have led to a "devaluation" of qualifications from the lower levels of education.

Table 5.5. OLS regression coefficients (marginal returns of educational categories) of first job scores (standard error is in parentheses), by cohort.

Different educational qualifications	COHORT 30-39		COHORT 40-49		Cohort 50-59	
	Model 1	Model 2[ab]	Model 1	Model 2[a]	Model 1	Model 2[a]
Constant (illiterate or no qualification)	13.584***	7.645**	12.333***	9.693**	9.142**	5.826
	(1.553)	(1.989)	(2.312)	(2.628)	(3.340)	(4.442)
Primary certificate	1.209	0.534	1.950	-0.294	4.045	1.735
	(1.793)	(1.946)	(2.489)	(2.674)	(3.623)	(3.750)
Lower secondary school attendance	6.584*	5.726	4.216	4.107	-4.071	-4.701
	(3.259)	(3.312)	(4.509)	(4.622)	(4.510)	(4.554)
Lower secondary school certificate	6.455	4.945	1.069	-0.361	7.305	6.342
	(3.489)	(3.540)	(4.597)	(4.726)	(4.471)	(4.520)
Upper-secondary school attendance	7.315	8.022	9.878**	7.129*	0.658	1.094
	(4.074)	(4.234)	(3.325)	(3.491)	(2.826)	(3.045)
Upper-secondary school certificate	15.364**	8.456	17.049***	18.647***	21.549***	18.910***
	(4.124)	(4.335)	(3.291)	(3.430)	(2.728)	(2.968)
Univerity attendance	8.185	11.279*	9.384**	6.456*	11.522**	10.831**
	(5.590)	(5.684)	(3.074)	(3.066)	(3.013)	(3.103)
University certificate	15.429*	7.080	16.714***	15.000***	21.615***	18.387***
	(6.138)	(6.199)	(3.524)	(3.538)	(3.466)	(3.495)
Father's education		0.291		0.504*		0.782**
		(0.281)		(0.252)		(0.269)
Father's occupation		0.320***		0.149***		0.131**
		(0.038)		(0.032)		(0.369)
Female		-2.696*		-1.602		-0.996
		(1.303)		(1.219)		(1.276)
R square (adj.)	0.480	0.542	0.558	0.589	0.511	0.545

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level

Total number of cases: 787 (655 in model 2) for cohort 30-39; 867 (753 in model 2) for cohort 40-49; 857 (772 in model 2) for cohort 50-59.

[a] Model 2 controls for social origin and gender.

[b] The small number of cases and the strong effect of father's occupational status on higher educational levels (diploma, university attendance and degree) are responsible for the changes in the coefficients and in their significance in cohort 30-39.

The first part of this analysis of the rate of returns to education shows a strong link between education and the prestige of the first jobs: making the transitions towards the higher levels of education repays the time spent at school, significantly increasing the prestige of the first job. Even the attendance of university has a highly positive effect in increasing the prestige level. This is an interesting result because it could mean that attending university is not a waste of time even if it is not followed by the acquisition of the university degree.[10]

This last finding leads to a consideration about the data reported in the official statistics. In Italy there is a lack of educational alternatives to university, while in many OECD countries people can choose to continue their studies and reach a post-secondary qualification which requires a shorter period of study than that of university. However, the

fact that in Italy attending university also makes a positive difference in terms of occupational returns induces one to think that university attendance works as a sort of tertiary education without formal certification and consequently without recognition in the official statistics.

5. The total returns

This second part of the analysis deals with the measuring of the total returns to different school qualifications; this tells us about the overall effects of each school qualification relative to the lowest educational category, composed of people with no qualification or only primary education. As previously explained, the aim of this analysis is to take into account the horizontal differences existing at upper-secondary school level, inasmuch as it is reasonable to expect different returns to various diplomas.

From the results it emerges that every qualification compared to primary education increases significantly the returns on the prestige of the first job. Women have higher returns to upper-secondary school qualification than men in all tracks (as is immediately visible in the steeper line in figure 5.7. than in figure 5.8.) with the exception of technical schools. In particular, certificates from vocational and academic schools increase the occupational prestige more for women than for men, while men's higher returns are associated with the diploma from technical schools.

[10] An alternative explanation would attribute this result to a selection effect: students who left university, before completing it, did so because they found a good job.

Figure 5.7. OLS regression effects of different qualifications on occupational prestige position - Women.

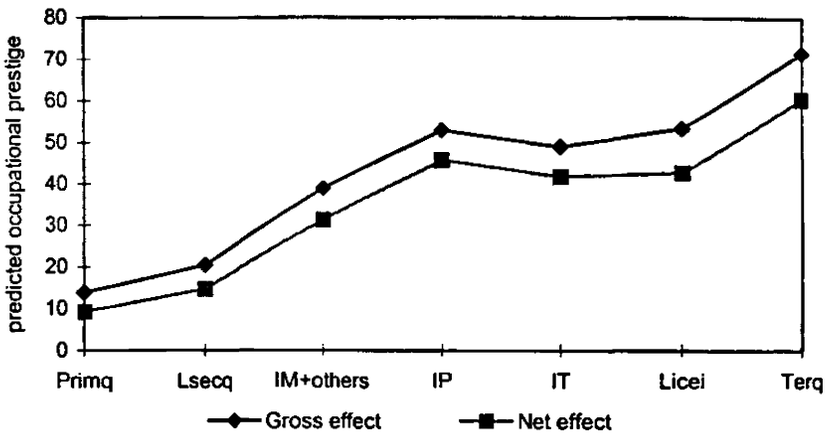
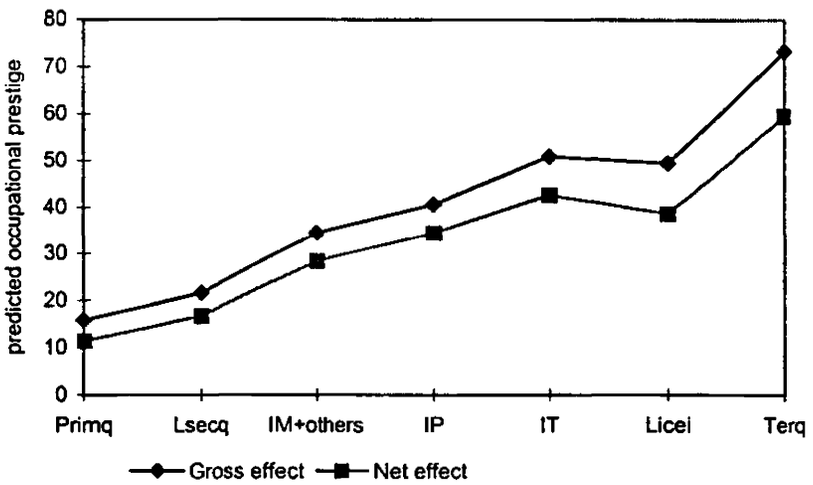


Figure 5.8. OLS regression effects of different educational qualifications on occupational prestige position - Men.



The gender differences described above find their explanation in the labour market segmentation which leads to different job allocations between men and women.

Some American studies show that women benefit more than men from having attended vocational education both in terms of chances of employment and earnings (Boesel et al. 1994, Arum and Shavit 1995, in Müller and Shavit forthcoming). This is because during their vocational training they acquire skills which are particularly useful for

finding a job in those fields traditionally considered "for women", such as health and clerical occupations. Moreover, Müller and Shavit (1998) underlines a national specificity of female participation: in Italy (as well as in France) it seems that secondary vocational qualifications increase women's chances of entering the labour force not only in comparison with lower qualifications but also with higher qualifications.[11]

The university degree is the qualification with the highest returns, measured as the prestige of the first job, for both women and men.

As in the marginal returns analysis, the introduction of the variables "father's education" and "father's occupation" has a depressing effect on the coefficients of education.[12] It is particularly interesting to note that, controlling for social origin, the decline in the coefficient related to academic schools is more noticeable than in the coefficients of other upper-secondary schools. It seems that having a diploma from a *Liceo* has a positive effect on first job prestige not only *per se* but because it is associated to belonging to a more advantaged social origin. This advantaged social origin directly and indirectly influences the acquisition of a more prestigious job. However, gaining a diploma from vocational schools (for women) and technical schools (for men) leads to higher returns in the labour market than a diploma from the academic schools. This is not surprising; it is well known that academic schools with their general learning content are more oriented towards preparing students for university than for the labour market.

From the oldest cohort to the youngest one there is a general decline in the rate of returns to all educational levels, but more consistently at upper-secondary level (figures 5.9. and 5.10.).

Moreover, across cohorts changes emerge in relation to the total returns to different types of upper-secondary school qualifications. The most important is the strong and continuous decrease in the returns to the diplomas from *Istituti Professionali* which, in the cohort 30-39 guaranteed the highest returns, while today it is one of the less valuable certificates. The returns to technical and academic schools show an increase from cohort 1930-39 to 1940-49 and a sharp decline in the youngest cohort. In this last cohort the

[11] On the contrary, in all countries under examination women's chances of being in the labour force increase with increasing levels of education.

diploma holders with the highest returns, measured as the prestige of the first jobs, are those who completed the technical schools.

Figure 5.9. OLS regression effects of different educational qualifications on occupational prestige position (gross effects), by cohort.

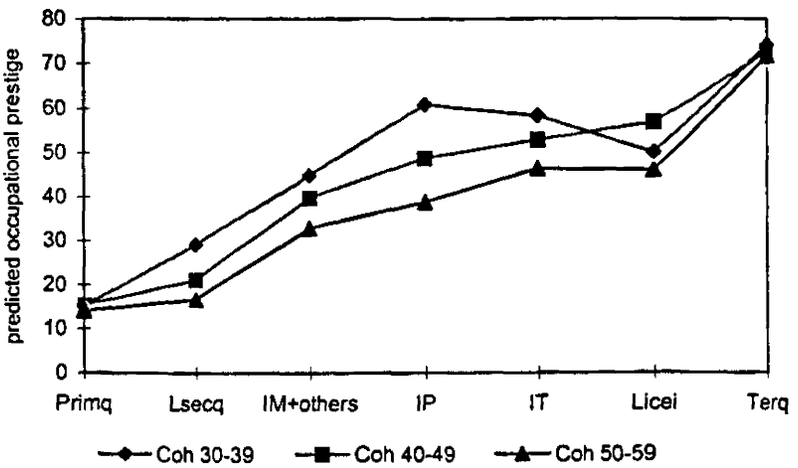
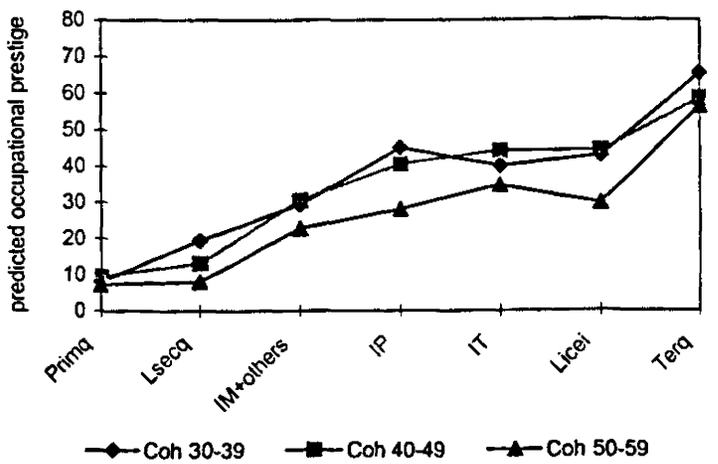


Figure 5.10. OLS regression effects of different educational qualifications on occupational prestige position (net effects), by cohort.



[12] See table A.5.7/A.5.8 in Appendix 1.

In conclusion, over time all certificates seem to lose importance in the gaining of the most prestigious first job; only university degree maintains its remarkable positive effect on the occupational allocation process. It is the most important certificate to enter the most prestigious jobs in all cohorts under examination, for both men and women.

To summarise, the analyses of the marginal and total returns show that total educational returns have declined in absolute value over time, but that marginal returns have increased over time. This result is consistent with a situation in which educational expansion has outpaced structural change in the economy. It also means that, from the point of view of an individual, it is increasingly important to reach higher levels of education, despite the fact that they are worth less than they were in previous cohorts. This should induce people to continue their studies.

In the next section the role of subjective beliefs on the probability of success at university will be analysed.

6. The role of subjective expectations about university career

Breen and Goldthorpe (1997) assume that the expected probabilities of success vary by social class due to class differences in ability, in the availability of resources, and in the risks attached to various educational alternatives. Thus, subjective beliefs about the chances of completing the next school level and arriving at more prestigious occupational outcomes plays an important role in shaping the decisions made by pupils from different social classes. In this view, the low rates of university graduation in Italy can be explained by different individual perceptions about the probability of success at the university level.

At the end of upper-secondary school students have to decide whether to continue education and enter university or to leave school and look for a job. According to Breen and Goldthorpe's model, this decision is also taken in the light of individual expectations of success. To estimate their subjective probability of success people can rely on the experience of people from the same social class. Knowing the proportion of pupils from the same class origin who have entered university, among those who had a diploma, and the proportion of those who entered who got a degree, they can infer how likely they are to

succeed at this level (Breen, Iannelli and Shavit, 1998). If a high proportion of the individuals from a given social class enter university and succeed, the students from that class will believe that they also have good probabilities of getting a degree, and they will choose to enter. However, if the proportion of those entering university is small and small is also the proportion of those who, after enrolling, complete the university program, they will believe that it is very hard to succeed and they will choose not to enter university.[13]

Across all classes there is a very strong positive relationship between the probability of entering and the probability of succeeding (a correlation of 0.92 at the level of social classes). With the result that, as table 5.6. shows, combinations of these probabilities are class specific. The free professions and service class have high values for both while the agricultural petty-bourgeoisie and the working class have low values for both.

Table 5.6. Probability of entering university and gaining a university degree for the population born between 1930-59, conditioned on having completed upper-secondary school or entered university, by social origin.

	Probability of entering university	Probability of acquiring university degree
Entrepreneur	0.47	0.43
Free profession	0.83	0.68
Service class	0.80	0.64
White collar	0.65	0.55
Urban petty bourgeois	0.52	0.45
Agriculture petty bourgeois	0.43	0.52
Urban working class	0.40	0.31
Agriculture working class	0.29	0.33
All	0.52	0.48

This implies that signals about likely one is to succeed at university will vary greatly according to class origins. For students of working class origins the fact that those who enter university are such a small proportion of the cohort which completes upper-secondary education, taken together with the low rates of success of these entrants, sends a signal that it is very difficult to succeed at university for someone from these particular classes. Conversely, for students of the free professions the opposite is true: a high

[13] More details on this hypothesis are in Breen, Iannelli and Shavit (1998) "Occupational Returns to Education in Italy: A Consideration of Rational Action Theory of University Attendance".

proportion of those who complete upper-secondary school enter university, and a relatively high proportion of these complete their degrees.

Despite the fact that, in Italy, returns to university are high (including the return to merely attending) only a few enter this level, mainly those who come from higher social classes. In the data under examination 16% of students enter university, but this ranges from 81% among the free professions to 2% among the agricultural working classes (table 5.7.).[14]

Table 5.7. Unconditional probability of entering university and gaining university degree for the population born between 1930-59, by social origin.

	Probability of entering university	Probability of acquiring university degree
Entrepreneur	0.28	0.12
Free profession	0.81	0.55
Service class	0.69	0.44
White collar	0.46	0.26
Urban petty bourgeois	0.20	0.10
Agriculture petty bourgeois	0.08	0.04
Urban working class	0.10	0.04
Agriculture working class	0.02	0.008
All	0.16	0.08

This suggest that patterns of behaviour are self-reinforcing in an equilibrating mechanism (low-educational-attainment equilibrium): low rates of entry among many social classes sustained by low rates of success, while among other classes, high rates of entry are sustained by high rates of success.

Moreover, beliefs about the chances of entering university and the probability of success may affect the choice of the type of upper secondary school to attend. If these beliefs are rather low, this will, all else being equal, reduce the attractiveness of entering and completing secondary education and of attending an academic education that is mainly oriented towards university entrance.

[14] Official statistics show that recently the proportion of people entering university has remarkably increased, however the rate of success are still very low and class dependent.

5. Conclusions

The current chapter is addressed at exploring the possible explanations for the low levels of university graduation in Italy based on the Rational Choice Theory. Starting from the assumption that an investment in education is worthwhile if it enhances job opportunities, the hypothesis that the low university graduation rates might depend on the low occupational returns to the higher educational levels was tested. To the analysis of the total returns to education, already done by previous research, I added the analysis of the marginal returns to different educational levels. In Italy, this analysis is something new and is also particularly interesting because it allows the additional returns to school completion and attendance to be studied. The results confirmed the strong link between educational levels and occupational status but they also contradicted a common belief that attending university without reaching the degree is a waste of time and money. In Italy, both the attendance and the completion of university significantly increase respondents' first job prestige relative to diploma and university attendance. This makes it difficult to explain the low levels of university graduation by only referring to the rational choice perspective.

Finally, the role of subjective expectations of university success in the decision to continue has been studied. The main assumption of this analysis is that students, when taking the decision of whether to go to university or not, take into account their subjective probability of success. They can try to estimate this probability by observing the academic experience of people from the same social class. By knowing the proportion of pupils from the same class who entered university after the diploma and the proportion of those who entered who gained the degree, they can infer their own subjective probability of success. It was found that the conditional probabilities of entering and completing university vary greatly among social classes, with the higher classes showing a higher probability of university attendance.

In the light of these results and of the analysis made of the tracking system in the previous chapter, we can understand why class differences perpetuate in the choice of the type of upper secondary school. Since the value of the *liceo* lies primarily in the access it affords to university education, while the other options provide returns which realise on

immediate entry to the labour market, the *liceo* is chosen only by those who are confident of entering, and being successful in university - and these are, overwhelmingly, young people from the families of the middle classes. It can be concluded that only a minority of pupils have a real incentive to go to university and that this minority is formed by those who graduated from academic schools and come from the higher social classes. In reality, these two categories of students almost completely coincide, lowering the rates of university graduation even further.

CHAPTER VI

REGIONAL DIFFERENCES IN EDUCATIONAL ATTAINMENT

1. Introduction

The previous empirical chapters analysed the role of ascriptive factors, such as gender and social origin, institutional constraints and labour market prospects, on individual educational choices in Italy. From the Structuralist perspective, the results showed that the Italian educational system reproduces social inequalities through the tracking system. The selectivity of the academic schools leads the majority of students to attend vocational and technical tracks, which in turn reduces the number of graduates from upper secondary schools and university.

From the Rational Choice perspective, it was found that in Italy occupational returns to education are high, like other developed countries (such as Germany): people with an upper secondary diploma or a university degree have significantly higher occupational prestige than those with compulsory schooling or less. This suggests that individuals should invest more in education. However, the low probability of success at university and the high unemployment rates of university graduates discourage people from embarking upon a long and uncertain educational career. Thus, the choice of attending vocational and technical tracks can be seen as the choice of a less risky option. Students acquire a diploma which is more valuable in the labour market than the academic diploma, and leave open the possibility of enrolling at university. However, since the benefits of attending university are uncertain, the students from the vocational and technical tracks usually leave education after they have acquired their diploma.

The next part of my empirical research focuses on geographical differences, which often make it difficult to talk about Italy as a unified entity. One could argue that national educational attainment rates are affected by regional disparities in the percentages of pupils reaching the various educational levels. The hypothesis is that in the economically underdeveloped Southern regions of Italy people are less

educated than people in the North and this lowers national educational attainment rates (Thesis of Industrialism). According to this thesis the more industrialised and economically developed North requires more skilled and specialised human resources, which would entice people to invest in education more than their Southern peers. The following part will be devoted to exploring geographical differences in educational attainment rates. After a presentation of the theoretical issues related to the problem of regional disparities in education, I will discuss the main economic, social, demographic and educational aspects which distinguish the Italian regions. Finally, I will use the data from the 1985 Social Mobility Survey to analyse regional differences in the log odds ratios of continuation rates at each educational transition point and in the occupational returns to education.

2. Theoretical issues

"The differences between strong and struggling regions can be explained by any number of factors: the level of infrastructure, the ability to develop and diffuse technologies, the type of industrial base, the degree of outside or foreign investment. But there is another factor that explains the economic success of regions and, that is, people. Government and the private sector alike are putting new emphasis on the role of human capital and its importance in maintaining and generating employment.....Since the least skilled workers are the first to be affected by unemployment and underemployment, skill acquisition and training must be a priority" (OECD, 1997; pp.15-17).

Inherent in this assertion is a conception of education which is "functional" in two ways: functional to the economic development of the "struggling" regions but also functional to individuals who can escape from unemployment or underemployment by investing in their human capital. According to the Thesis of Industrialism (Treiman,1970; Kerr, Dunlop, Harbison, Myers, 1960/73; Parsons in Grusky, 1994) the modernisation process, dependent as it is on advanced technologies, needs highly qualified labour forces. Scientific evolution leads to continual and rapid changes in technology which require a wide variety of skills and

specialised human resources. In this context, education plays a very important role, either in the form of specialised and technical training, which is strictly related to the professions of the industry (such as those of managers or engineers), or in the form of general education more linked to the need for flexibility in the labour market. Thus, to the increase in the demand for more educated and skilled workers there should correspond an increase in the educational attainment rates. On the contrary, where there is a high percentage of the work force engaged in agriculture and a low percentage working in industry, education plays a marginal role in the job allocation process. Within a non-industrialised society conditions at birth are much more important in determining future productive roles. Family of origin and direct inheritance determine occupational allocation (Grusky, 1983). The main consequence of this way of thinking is that expansion of education is a feature of economically developed regions, in the case of Italy the regions of the North and Centre.

One limit of this theory is the strong emphasis on the link between education and industrialisation. This leaves in the shadow other reasons that induce people to invest in education even in the underdeveloped economies. In an economic system characterised by massive expansion of non-productive labour and government employment and the growth of a tertiary sector, educational credentials can become the principal means for acquiring a job (Collins, 1979). It follows that education in the underdeveloped areas of Italy would be less important for the acquisition of technical competence and more important as a credential for filling jobs in private and public services, in public administration, in bank and insurance system or to enter the professions (Moscati, 1992, p.344).

Investing in education can be also important in view of a possible migration towards the most economically developed areas. In this case the acquisition of skills through education by Southerners would be in order to find a job in the Northern labour market, where job opportunities are higher especially in the industrial sector.

Moreover, in underdeveloped areas in which job opportunities are limited and unemployment rates particularly high, one could choose to invest in education to be more competitive than the others. This is because individuals expect that their

chances of finding a job decline if a lot of people acquire higher educational levels. In this case education works as a "positional" good inasmuch as the decision to continue schooling is made in order to defend the "individual's relative position in the labour queue" (Thurow, 1975). According to this viewpoint, in a highly competitive market, better educated people have a relative advantage in finding a job.

Parking theory (Gambetta, 1987 pp.133-148) also explains the great number of highly educated people in underdeveloped areas as a response to the problem of unemployment: pupils, in order to avoid being unemployed, decide to stay longer at school. In this view, acquiring a higher educational qualification is considered as an instrument by which to protect oneself against unemployment instead of a pre-requisite to obtaining profitable and good quality jobs.[1]

Finally, education is also an instrument to maintain or to improve social class position. In a society which is characterised by persistent economic stagnation, such as the Southern one, investment in education could be the only means for upward mobility. This occurs because other means for upward mobility different from schooling are absent and family economic resources are not sufficient to ensure social ascension.

In the light of the above mentioned reasons and in contrast with the modernisation theory an alternative hypothesis is that the least economically developed regions of Italy show the same or higher levels of educational attainment than the other areas of the country.

This hypothesis found empirical evidence in the Irish case (Breen, Heath and Whelan, 1997): the more rural and less industrialised Republic of Ireland presents higher rates of educational participation than the more industrialised Northern Ireland. According to the authors, the main reason is found in the different economic situation of the two parts. Industries in Northern Ireland do not need highly qualified labour forces and people with low educational levels have higher job opportunities than in the Republic of Ireland. Thus, in the South education becomes more important to gain a good job and consequently a good social position.

Shavit and Westerbeek (1998), analysing the log-odds ratios of school transitions in Italy, discovered that over time people living in the North have become less likely to gain an upper secondary school diploma than Southerners. They also attributed the higher propensity to continue education to the economic conditions of the South (high unemployment rates and large employment in the public sector).

3. What is a region?

The discussion of the differences between the North and South of Italy has been lively since the unification of the country, even if it assumed different contents from time to time. The incessant interest in this issue lies in the persistence of territorial inequalities. Even during the 1950s, the years of the Italian economic boom and the beginning of the second phase of the industrialisation process, the gap between the North and South was not reduced. At that time the research of a parliamentary commission headed by the deputy Tremelloni[2] pointed out the existing economic disparities between the two parts of the country: the industrialised and productive North strongly contrasted with the agrarian and underdeveloped South. From this inquiry it emerged not only that the South was economically dependent on the rest of the country, but also other two important problems, the higher rates of unemployment (and under-employment) and illiteracy. These two phenomenona also had strong and preoccupying links. The majority of unemployed in the South did not have any educational qualification or, even worse, they lacked the basic elements of literacy.

In the following years the dichotomous North/South partition was questioned by the economic transformation which started in the 1950s but went on in the subsequent decades. The strong economic growth of the "Third Italy", that is the North-east and Centre regions, led discussion of a tripartition of the country (Bagnasco, 1977). The North-west, historically the most industrialised area, was characterised by large firms which, after a period of great expansion, in the mid-70s

[1] Barbagli in the 1970s found confirmation of this theory in Italy. People in the underdeveloped Southern regions acquired more education than in the industrialised North.

entered a crisis and were subjected to a restructuring process. The North-east and Centre developed very successful small- and medium-sized firms. In contrast the South and Islands remained behind, still economically under-developed, with the exception of some isolated areas where an emergent industrialisation took place.

It is a consequence of the emergence of these new areas of industrialisation in some Southern regions (such as Abruzzo, Molise and Puglia) that in the last years some authors have stressed the lack of unifying characteristics within the South and the necessity of talking about Southern territories separately to avoid easy simplifications. According to this point of view the industrialisation process of some of these territories would have led to a new model of economic development. Self-determined economic development which was no longer based on an outward dependence model. However, an alternative view point has argued that, despite its internal differences, the South is characterised by strong homogeneity: high levels of unemployment, large recourse to "black" market and illegal activities, high employment rates in the public sector and services, poor infrastructures and public services, and consistent population growth. Thus, the North/South gap has not been narrowed and the internal resources of the South do not seem to be able to substitute the investments from outside.

Following the latter view this chapter will analyse the South as a whole. Moreover, Bagnasco's model referring to three geographical areas (North-west, North-east/Centre and South/Islands) rather than two is preferred since the typical dualistic view of Italy may obscure specific differences existing in the "Third Italy", not only in comparison with the South but also with the North-west.

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[2] Information about the works of the Tremelloni Commission can be found in Commissione parlamentare d'inchiesta sulla disoccupazione (1953) *La disoccupazione in Italia*, vol. 4, Roma.

4. Some data about regional differences

4.1 Labour market indicators

The data which better depict Italian regional diversities are those related to the labour market. [3] Although there are no relevant differences in male activity rate between the three areas of the country, female activity rate is much lower in the South (table 6.1.). There are many possible explanations for this phenomenon. One of the most plausible underlines the discouraging effect that the high female unemployment rate of the South exercises on women's propensity to work (Mingione, 1993).

Table 6.1. Some statistics on the activity rate and employment by geographical areas

	Activity rate[1] (1995)			Employment rate[2] (1995)			Employment rate by sector* (1996)		
	Total	Men	Women	Total	Men	Women	Agriculture	Industry	Services
North-west	49.2	62.0	37.5	45.8	59.1	33.7	3.6	39.2	57.2
North-east /Centre	49.2	61.5	37.9	45.9	59.1	33.8	6.0	36.3	57.7
South and Islands	44.0	60.7	28.6	35.7	51.3	21.2	10.2	22.6	67.2
ITALY	47.0	61.3	33.7	41.4	55.7	28.3	6.8	32.1	61.1
EUR15	55.2	66.2	45.0	49.3	60.0	39.4	5.3	30.2	64.5

* The EUR15 data are related to the year 1995.
1 Activity rate is the ratio between the population in the labour forces and the population aged more than 14 years old.
2 Employment rate is the ratio between the population in employment and the population aged more than 14 years old.
Source: My estimations based on Eurostat (1996) *Regions. Statistical Yearbook* and Istat (1998) *Annuario Statistico Italiano.*

The employment rate (especially female employment) is particularly low in the South/Islands, compared to the rest of the country. Only 51% of men and 21% of women are employed in the South compared to 59% and 34% in the North-west, North-east and Centre.

[3] The official statistics drawn from the ISTAT data which are presented in the next section use a tripartite classification slightly different from Bagnasco's tripartition. Emilia Romagna and Lazio are located by Istat respectively in North-east and Centre while, in Bagnasco's classification, the first is considered part of the Centre and the other part of the South.

Employed people are also differently distributed: a higher percentage of Southerners are working in agriculture (10.2%) and in the service sector (67.2%), while a lower percentage of them is employed in the industrial sector (22.6%). The Southern economy has also some distinct features, that is a prevailing weight in the productive and occupational structure of building contractors (*imprese edili*), commerce and the public sector (Boccella, 1993). It is well known that the expansion of services and the public sector in the South has been used as a way to employ a large number of labour forces that otherwise would have been unemployed.

Indeed, Southern regions show very high levels of unemployment. While the national unemployment rate (12%) is not dissimilar from the corresponding average value of the European Union countries, differences within the country and between the three Italian areas and the EU countries are remarkable (table 6.2.). Both the North-west and North-east/Centre show lower unemployment rates than the South and the EU countries. Moreover, unemployment in the South severely strikes women and young people.

Table 6.2. Unemployment and population data by geographical areas

	Unemployment rate (1995)			Unemployment rate by age (1995)		Population (1993)		Birth rate (1993)
	Total	Men	Women	Age<25	Age>=25	Age<25	Age>=65	
North-west	7.1	4.8	10.6	20.1	5.0	26.8	16.6	0.8
North-east and Centre	6.8	3.9	11.1	18.4	4.9	26.4	18.5	0.8
South and Islands	19.4	15.7	26.8	55.1	13.7	35.5	13.5	1.1
ITALY	12.1	9.3	16.7	33.6	8.5	30.7	15.7	1.0
EUR15	10.7	9.5	12.4	20.5	9.1	32.0	15.0	1.1

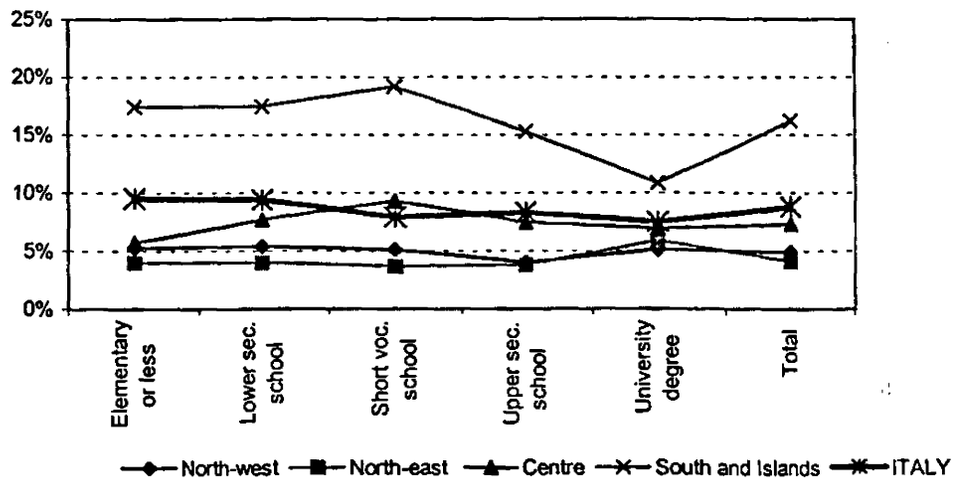
Source: My estimations based on Eurostat (1996) *Regions. Statistical Yearbook.*

In addition demographic factors tend to widen the geographical differences: the population in the South continues to grow as testified by the higher birth rate and the higher percentage of young people. While the North and Centre experience the opposite phenomenon, an increasing ageing process (table 6.2.). This means that in the short term the South will still have a conspicuous surplus of labour forces (Boccella, 1993). The North and Centre of Italy will face the opposite problem, that is the scarcity of labour forces. This could induce people from the South to migrate

to the North and Centre (as has happened in the past). However, it has been argued that the opening up of new job opportunities in the North will be limited to lower status occupations (such as manual workers) with medium-low remunerations. Even in the case of less educated people from the South the prospects of migrating to the North would not be considered worthwhile due to the high costs and the low benefits associated with this choice (Mingione, 1993).

Looking at unemployment rates by level of education it emerges that there is a linear trend at the national level: unemployment rates decline with increase in educational attainment, except for shorter vocational qualifications which seem to reduce the risk of unemployment compared to upper secondary school diploma. However, at regional level there does not exist a comparable trend but a more diversified picture (figure 6.1.). The higher rates of unemployment are associated with lower educational levels in the North-west (even if no great differences emerge between highly and poorly educated people); university graduates in the North-east; lower and secondary school graduates (especially from vocational training) in the Centre; and people with a vocational qualification, followed by those with compulsory schooling or less, in the South.

Figure 6.1. Unemployment rates of the population aged 25-64, by region and level of education

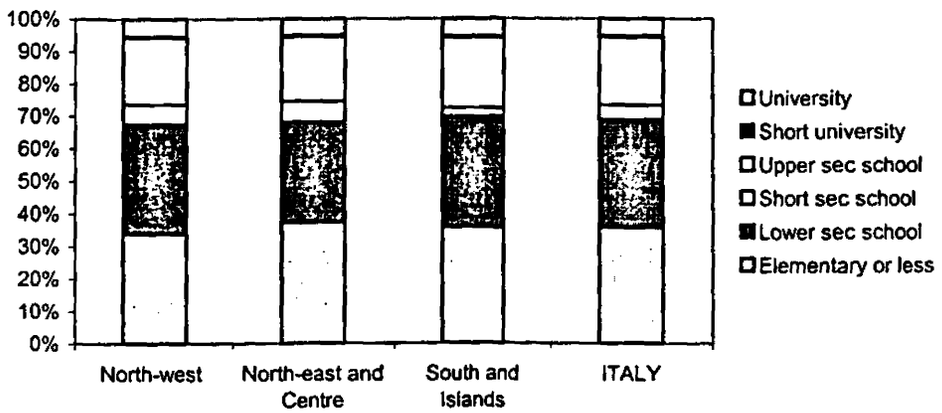


Apart from the already mentioned higher rates of unemployment, the South differs from the rest of the country because of another very interesting factor. Having a university degree in the South reduces to a large extent the risk of being unemployed while it does not in the other territories.

4.2 Educational achievement

The regional statistics on education presented by Istat are not disaggregated by different age groups but refer to the whole of the population. For this reason they are probably biased by differences in the proportions of young and old people living in the three geographical areas. To partly overcome this problem children aged 9 years or younger, who could not have reached any school qualification, have been omitted from the calculation. This operation, at least, reduces the percentages of illiterate people and people without school qualification. This group is over-represented in the South, compared to the North and Centre, due to the higher proportion of children living there. However, the data must be read cautiously because they continue to be biased by regional differences in the age distribution, except for the group who have elementary school certification or less. From figure 6.2 no important regional differences emerge in attainment rates of the population aged over 10 years.

Figure 6.2. Educational attainment rates of population aged 10 and over, by geographical area (year 1997)



Even if these data are not directly comparable with the OECD statistics which consider people aged between 25 and 64, they show an extraordinary homogeneity which seems to indicate that regional differences do not explain the low educational attainment rates at the national level pointed out by OECD publications. However, these data do not show whether there have been changes over time which made these percentages look similar. Some more information can be derived from the official statistics.

All over the country there has been a growing proportion of people who decide to go on after completion of compulsory schooling and who reach the school-leaving diploma (Istat, 1996). However, in the South there emerges a contradictory situation: an increasing proportion of people continue schooling but a high proportion of them experience failures and drop out at all educational levels (Moscati, 1992). The dropping-out phenomenon at the compulsory level has almost disappeared in the North and Centre of Italy but it has not in the South (Bellacicco and Tronti, 1991). Moreover, the rates of failure and dropping-out at secondary education are higher in the South than in the North and Centre: 5.5% at lower secondary school and 8.4% at the upper secondary level fail and are made to repeat the same school year (tab.5). Difficulties and failures during the school period often lead to the decision to drop-out: 7.1% of students abandon upper secondary school in the South compared to 6.5% in the North and Centre. More people in the North and Centre attend upper secondary school and gain the final school-leaving diploma: in the academic year 1995-96 in the population aged between 14 and 18, 83.6% of them were attending upper secondary school in the North and Centre while the corresponding figure was 75.5% in the South. Moreover, among those who were 19 years old 64.7% reached the diploma in the North/Centre and 61.0% in the South (table 6.3.).

Table 6.3. Some data on secondary school level, by geographical area

	North and Centre	South and Islands
Rates of failure - Lower secondary school	3.9%	5.5%
Rates of failure -Upper secondary school	7.7%	8.4%
Attendance rates - Upper secondary school	83.6%	75.5%
Drop-outs - Upper secondary school	6.5%	7.1%
School graduates - Upper secondary school	64.7%	61.0%

Note: Data on rates of failure refer to the academic year 1996-97 while the other to the academic year 1995-96
Source: ISTAT (1998) *Annuario Statistico Italiano*

Data on university participation are difficult to construct. In Italy it is almost impossible to get a precise estimate of graduates because of the remarkable number of students who stay longer than normal on university courses (*fuori corso*). In the academic year 1996-97 the percentage of those who were *fuori corso* at university was 38% of the total number of students and this percentage does not differ in the three areas (Istat, 1998). The difficulties which Italian students have in continuing their university studies is thus a common phenomenon all over the country. Another common feature is the higher number of women than men enrolling in university and graduating but female advantage in the South is more remarkable than in the rest of the country. In the South 55.6% of the total number registered at the first year and 56.9% of the total number of graduates are women.

A study on the occupational allocation of university graduates carried out by Istat (1995) shows that, three years after university graduation, only 41.6% of graduates have a stable job in Italy. The others are either employed temporarily or with *contratti di formazione-lavoro* (job-training contracts) or they are not working (among them 23% is looking for a job). This datum confirms the difficulty young people have, even the most highly educated ones, in finding a job. However, the geographical differences are remarkable. In the North-west 52.7% of graduates have found a stable job but this percentage sharply declines as one goes down to the Centre and South of Italy, reaching the lowest value, 27.2%, in the Islands. Among graduates who are not working, the percentage of them who are still looking for a

job is around 13% in the North-west and North-east, 21.0% in the Centre and 38.7% in the South.

It is evident from this general overview on geographical differences that young people in the South face more difficulties in both their educational and occupational career than their peers living in the North and Centre of Italy.

In the following section a multivariate analysis of school transitions is presented in which it is explored whether there are significant regional differences in the log odds ratios of educational continuation rates and whether these differences are due to regional differences in the composition of the population in terms of family background, gender and cohort of birth. Finally, an analysis of the occupational returns to education in the three areas has been added. The aim is to discover regional differences in the occupational benefits which a person can gain acquiring higher levels of education.

5. Methodology and variables

The first part of the analysis presented in this chapter is carried out on a subsample of people born between 1930 and 1965, and includes both males and females. A conditional logit model (Mare 1981) is used to study three main school transitions: the decision of whether to attend lower secondary school, to attend upper secondary school, to attend university, or whether to drop-out. The independent variable "place of residence" is the area of Italy in which the respondents had their residence at 14 years of age. It is measured as two dummy variables: the first is coded 1 for the North-west and 0 for the South and Islands; the second is coded 1 for the North-east and Centre and 0 for the South and Islands (in both variables the South and Islands is the reference category). These three geographical parts were constructed according to Bagnasco's scheme: the North-west includes Valle d'Aosta, Piemonte, Lombardia and Liguria; the North-east and Centre consists of Trentino-Alto Adige, Veneto, Friuli-Venezia Giulia, Emilia Romagna, Toscana,

Marche and Umbria; and the South and Islands includes Lazio, Abruzzo, Molise, Campania, Puglia, Basilicata, Calabria, Sicilia and Sardegna.

Regarding the other independent variables, "female", "father's education", "father's occupation", "farm origin" and "cohort", their construction was already explained in chapter 4.

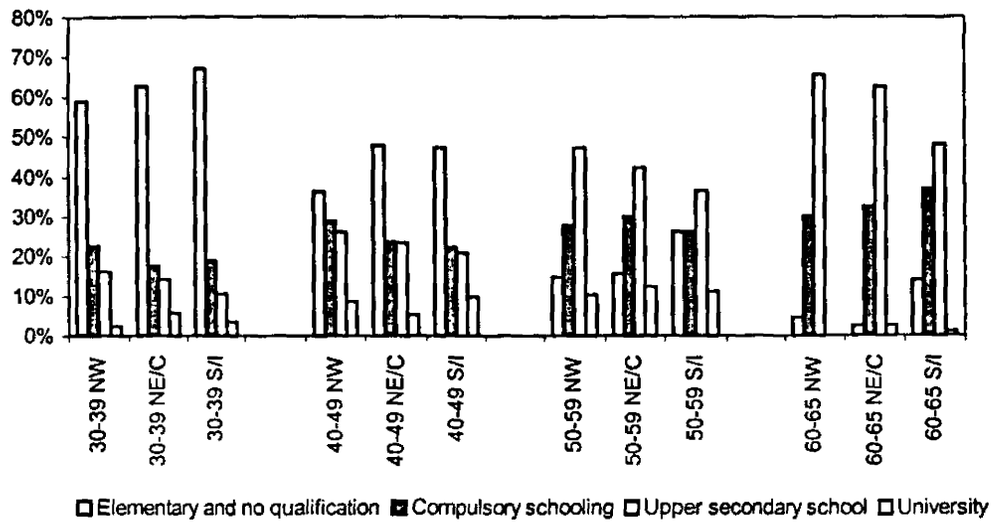
In the second analysis the subsample considered is composed of people born between 1930 and 1959. Indeed, people born after this period are excluded from the analysis because at the time of the interview they were too young to have had any work experience. As in the previous chapter both the marginal and total returns to education will be examined using OLS regression analysis. The dependent variable is the occupational status of the respondents' first job, measured by reference to the De Lillo-Schizzerotto scale (1985). In the measurement of the marginal returns the independent variable is the respondents' last attended or completed educational level at the moment of entering the first job. In the analysis of the total returns, the independent variable is the respondents' highest school qualification obtained before entering the labour market, with a distinction made between different types of upper secondary school diploma. In this part of the analysis "social origin", "gender" and "cohort" are also introduced among the independent variables and used as previously described.

6. Descriptive statistics

The expansion of education is a phenomenon which took place in all regions of Italy. Over time the levels of educational attainment increased in each of the North-west, North-east and Centre, and the South (figure 6.3.). However, the South continues to show a peculiarity: fewer pupils reach the end of lower secondary school, but those who arrive at the upper secondary school diploma are much more inclined to continue to university than their peers from other regions. Indeed, the proportion of Southerners without the school-leaving certificate from compulsory education is high (14%) even in the youngest birth-cohort of people born between 1960 and 1965.

Moreover, less people in the South reach a diploma from upper secondary school than in the North-west and North-east and Centre in all cohorts under examination. At the university level the situation is less unbalanced or even reversed in favour of the South, which shows higher rates of university graduation than the North-west.

Figure 6.3 Rates of educational attainment, by cohort and geographical area



Note: The low rates of university completion in the birth-cohort 1960-65 are due to the young age of respondents. Moreover, in this cohort the percentages of people with a diploma from upper secondary school are higher than they should be because they incorporates also people who will gain a university degree afterwards

Two main findings result from this first descriptive analysis. Firstly, the major geographical differences in educational attainment rates are those between the South and North-west, with the North-east and Centre in an intermediate position. Secondly, as previously pointed out, in the South there are generally lower levels of educational achievement. This contrasts with the high propensity of those who completed upper secondary school to enrol in university.

The data on the rates of school transition confirm this last assertion: across all cohorts the proportion of people who gain a school-leaving certificate from compulsory schooling and afterwards go to upper secondary education is higher in

the North-west than in the South. However, after gaining the diploma, more people in the South enrol in university level (table 6.4.).

Table 6.4. Percentages of individuals who attended and completed the different cycles of education, by cohort and geographical area (the percentages conditioned on having attended or completed the preceding one is in parentheses).

Educational levels	Cohort 30-39			Cohort 40-49			Cohort 50-59			Cohort * 60-65		
Less than elementary qualification	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	100	100	100	100	100	100	100	100	100	100	100	100
Elementary qualification	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	94.0	87.9	80.0	98.0	96.1	89.9	100	100	94.5	98.6	100	98.1
	(94.0)	(87.9)	(80.0)	(98.0)	(96.1)	(89.9)	(100)	(100)	(94.5)	(98.6)	(100)	(98.1)
Lower secondary school attendance	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	49.2	43.3	36.4	66.1	55.8	54.6	87.9	87.4	76.4	96.4	99.1	88.7
	(52.4)	(49.2)	(45.5)	(67.5)	(58.0)	(60.7)	(87.9)	(87.4)	(80.8)	(97.7)	(99.1)	(90.4)
Lower secondary school qualification	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	43.1	38.3	33.4	64.1	52.6	52.7	85.2	84.5	73.9	95.9	97.4	86.0
	(86.9)	(88.5)	(91.9)	(96.9)	(94.3)	(96.7)	(96.9)	(96.3)	(96.8)	(99.5)	(98.3)	(96.7)
Upper secondary school attendance	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	25.8	21.6	17.7	43.7	33.3	35.1	64.1	62.1	55.2	75.5	74.6	62.8
	(60.4)	(56.5)	(53.1)	(68.2)	(63.3)	(66.5)	(75.2)	(73.8)	(74.7)	(78.7)	(76.5)	(73.3)
Upper secondary school qualification	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	18.5	19.9	14.3	34.7	28.8	30.4	57.4	54.5	47.6	65.5	65.1	49.1
	(65.5)	(86.9)	(80.8)	(73.8)	(83.2)	(85.5)	(87.8)	(86.6)	(85.5)	(81.3)	(85.0)	(73.8)
University attendance	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	5.2	8.5	6.4	13.5	11.6	18.3	23.0	27.1	24.6	25.0	29.7	25.9
	(31.0)	(45.3)	(44.4)	(41.8)	(41.8)	(60.8)	(41.0)	(50.3)	(52.0)	(40.7)	(46.9)	(55.8)
University degree	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
	2.4	5.7	3.6	8.6	5.3	9.7	10.2	12.3	11.2	-	2.6	1.1
	(46.2)	(66.7)	(57.1)	(63.6)	(45.5)	(53.3)	(44.1)	(45.3)	(45.7)	-	(8.7)	(4.2)

* The low rates of university completion in this last cohort are due to the young age of the respondents.

How can we explain this "paradox"? On the one hand, high percentages of drop-outs reflect the depressed situation of some areas of the South. Here culturally and economically disadvantaged families are more likely and their children are more likely to abandon school very early during elementary or lower secondary school.[1] On the other hand, the high percentage of university graduates could be explained by low probability of finding a job. As previously mentioned (paragraph 2), people can decide to invest in education to protect themselves from the risk of being unemployed (Parking Theory) but also to be able to compete for a higher number of job opportunities. In a highly competitive market in which people are struggling to find a job university graduates can have an "advantage". They can compete not only to fill graduate occupational positions but also to fill those jobs which in the past were directed towards diploma holders.

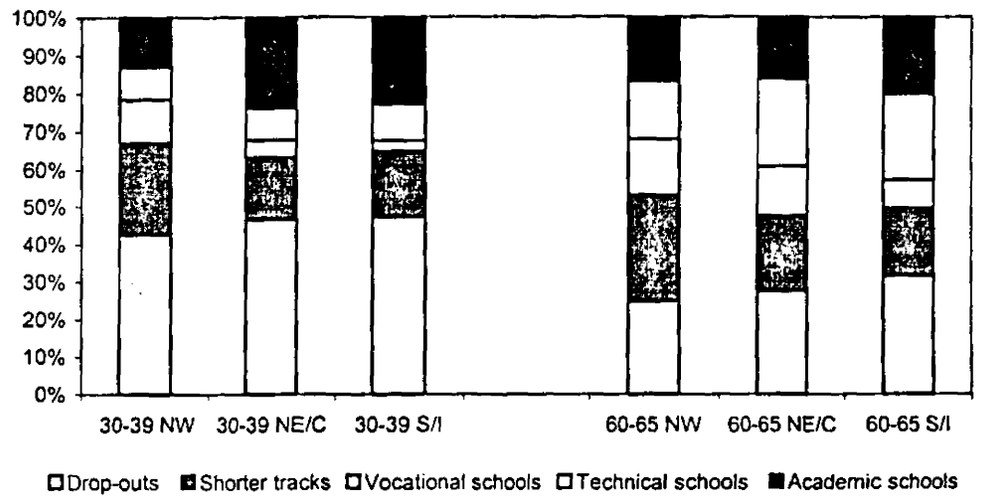
In addition the absence of a strong industrial sector reduces the chances of finding a job for people with just compulsory schooling or a diploma from upper secondary school. The labour market of the South seems to be polarised between the need for low skilled workers to fill jobs in agriculture and manual jobs (for example, in *imprese edili*), and the need for highly skilled workers in such sectors as public administration and services. Thus, there is a strong incentive to acquire higher educational levels for those who desire to find a secure and stable job in these latter sectors. Gaining a university degree helps one find a "good" job, in the sense of being well guaranteed and protected,[2] reducing the risk of being employed in temporary jobs or in the black market.

At the level of upper secondary school, do educational choices differ in the three areas of the country? The distribution of students among different types of upper secondary school has changed over time. In the chapter on tracking an expansion in the proportion of people attending vocational and technical schools emerged. Looking at the same data disaggregated by regions this increase could be observed in all three areas but to a different extent (figure 6.4.). From the oldest cohort to the youngest one the attendance rate in technical schools increased out of all proportion in the South and North-east/Centre of Italy, becoming the most chosen tracks in these two areas. It also doubled in the North-west but in this area the attendance rates of shorter tracks (such as 3-year vocational courses) greatly exceed those of the other schools. Moreover, in the North-west educational expansion at the upper secondary level involved all types of schools while in the North-east/Centre and South there has been a decline in the percentage attending academic tracks. However, even if declining, the attendance rates in academic schools are higher in the South than in the rest of the country.

[1] At the end of the 1980s a plan of intervention against the dropping-out phenomenon in compulsory schooling emanated from the Ministry of Education. Twenty-four provinces over the twenty-eight areas involved in this program were located in the South.

[2] Typical guarantees associated with jobs are the rights of having a pension, health care, maternity leave, etc. and also the security of not losing the job (especially in the public sector).

Figure 6.4. Attendance rates in different types of upper secondary school, by cohort and geographical area



The distribution of students among different types of upper secondary level education could reflect occupational opportunities offered by local economies. In the North-west a diploma from shorter vocational tracks ensures job opportunities in the industrial sector which probably are precluded to those living in the South. The rise in the attendance rates of technical and vocational schools, which took place especially in the North-east/Centre and South, could be seen as a product of the process of educational expansion. As pointed out in the previous chapters, pupils who in the past were very likely to abandon school after the acquisition of compulsory schooling certification today continue choosing tracks more oriented to the acquisition of a marketable qualification. The high proportion of people in the South who today continue to attend academic tracks can be explained by the higher propensity of Southern students to enter university. However, the opening up of university access to people coming from technical and vocational schools has probably diverted some students from going to academic schools, as the declining rates in the attendance of academic tracks in the North-east/Centre and South seems to testify.

7. The effect of living in different geographical areas on educational transitions

The chances of an individual continuing education versus dropping-out, conditioned on the attendance of the previous lower educational level, are modelled using logit analysis. The dependent variable is the log of the odds ratio of making the transition to the following educational level and the independent variables are place of residence, sex, father's education and occupation, farm origin and birth-cohort. Three transitions are considered in the analysis: from elementary qualification to lower secondary school attendance, from lower secondary school attendance to upper secondary school attendance and from upper secondary school attendance to university attendance. The transitions from the attendance to the attainment of the various educational levels are omitted because the effect of the geographical variable was insignificant. Once Southern pupils enter lower secondary and upper secondary school their chances of gaining the school-leaving certificate are not significantly different from pupils living in other parts of Italy. This means that regional differences in the dropping-out phenomenon pointed out by ISTAT data are not so remarkable.

The analysis starts with the presentation of the most simple model in which only the variable "place of residence" is introduced. It then proceeds with the inclusion of the other independent variables: gender, social origin and birth-cohort. This tests the extent to which "place of residence" differences are due to compositional effects. The interaction effects between "place of residence" and the other independent variables have been analysed in the three educational transitions. However, in the interest of parsimony, only the significant ones will be presented.

The chances of entering lower secondary school, after completed elementary education, appear significantly higher in the North-west than in the South of Italy (table 6.5.). After controlling for social origin the coefficient related to living in the North-west is no longer significant. However, when the effect of cohort is taken into account, both living in the North-west and in the North-east/Centre of Italy has a significant positive effect on this school transition compared to the South.

Table 6.5. Conditional model of school transitions. The transition from elementary school to lower secondary attendance. Cohort 30-65.

Intercept	0.84*** (0.05)	-1.35*** (0.15)	-2.37*** (0.19)	-1.78*** (0.19)	-1.67*** (0.24)
North-west /South and Islands	0.31** (0.09)	0.07 (0.10)	0.30* (0.11)	0.21 (0.12)	-0.37 (0.57)
North-east and Centre/ South and Islands	0.14 (0.08)	0.07 (0.10)	0.24* (0.11)	0.24* (0.11)	-0.33 (0.48)
Female		-0.50*** (0.08)	-0.62*** (0.09)	-0.67*** (0.09)	-0.53** (0.13)
Father's education		0.36*** (0.02)	0.31*** (0.02)	0.27*** (0.02)	0.21*** (0.03)
Father's occupation		0.01*** (0.002)	0.02*** (0.003)	0.02*** (0.003)	0.02*** (0.003)
Cohort 40-49 (cohort 30-39)			0.55*** (0.11)	0.52*** (0.11)	0.69** (0.17)
Cohort 50-59			1.88*** (0.13)	1.86*** (0.13)	1.88*** (0.18)
Cohort 60-65			2.91*** (0.19)	2.86*** (0.19)	2.47*** (0.23)
Farm origin				-0.80*** (0.20)	-0.58** (0.14)
Female* North-west					0.15 (0.24)
Female*North-east/Centre					-0.74** (0.24)
Father's education*North-west					0.13 (0.08)
Father's education*North-east/Centre					0.19** (0.07)
Cohort 40-49*North-west					-0.23 (0.29)
Cohort 40-49*North-east/Centre					-0.32 (0.28)
Cohort 50-59*North-west					-0.11 (0.33)
Cohort 50-59*North-east and Centre					-0.02 (0.33)
Cohort 60-65*North-west					0.59 (0.54)
Cohort 60-65*North-east/Centre					2.14** (0.79)
Farm*North-west					-0.77** (0.27).
Farm*North-east/Centre					-0.23 (0.25)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level

The last two models in table 6.5. show that the variables which have a greater effect on the coefficients of "place of residence" are agriculture background for the North-west and gender, social origin and birth-cohort for the North-east/Centre. The introduction of the variable "farm origin" reduces the positive effect of living in the North-west and makes it no more significant. Indeed, the

interaction effect between "place of residence" and "farm origin" shows that having an agriculture background in the North-west has a much higher negative effect on the chances of entering lower secondary school than it has in the South. Thus, among those who do not have an agriculture background there are not significant differences related to place of residence. Moreover, when the interaction effects are also included in the model it is seen that living in the North-east/Centre of the country *per se* does not make any significant difference compared to the South. In this case three factors differentiate the North-east/Centre from the South: the more disadvantaged situation of women (who are less likely than men to attend lower secondary school in the North-east and Centre), the higher positive effect of father's education, and the effect of being born in the period 1960-65.[3]

In the second transition, from lower secondary school attendance to upper secondary school attendance, there are no significant geographical differences (table 6.6.). This means that living in the North-west, North-east/Centre and South does not affect an individual's likelihood of entering upper secondary school. The other independent variables have a significant effect but they do not play a different role according to the place of residence. Indeed, no interaction effects are significant.

[3] I find very difficult to find a satisfactory explanation for the differences between North-East/Centre and South in the effect of gender, father's education and birth-cohort on the transition from elementary school to lower secondary attendance.

Table 6.6. Conditional model of school transitions. The transition from lower secondary school attendance to upper secondary school attendance. Cohort 30-65.

Intercept	0.69*** (0.06)	-1.64*** (0.17)	-2.57*** (0.21)	-2.34*** (0.22)
North-west/South and Islands	0.12 (0.10)	-0.10 (0.11)	-0.04 (0.12)	-0.09 (0.12)
North-east and Centre/South and Islands	-0.01 (0.09)	-0.12 (0.11)	-0.09 (0.11)	-0.10 (0.11)
Female		-0.22* (0.09)	-0.28** (0.09)	-0.28** (0.09)
Father's education		0.31*** (0.02)	0.31*** (0.02)	0.29*** (0.02)
Father's occupation		0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)
Cohort 40-49 (cohort 30-39)			0.81*** (0.15)	0.80*** (0.15)
Cohort 50-59			1.19*** (0.14)	1.19*** (0.14)
Cohort 60-65			1.13*** (0.15)	1.11*** (0.15)
Farm origin				-0.39** (0.12)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level

The last transition shows very interesting results: living in the North-west instead of the South reduces the chances of entering university (table 6.7.) and this significant negative effect becomes higher after controlling for the other independent variables. The coefficients measuring the interaction effect between "place of residence" and the other independent variables are not significant. People living in the North-west, independently from the effect of the other examined factors, are less likely to attend university than Southerners.

Table 6.7. Conditional model of school transitions. The transition from upper secondary attendance to university attendance. Cohort 30-65.

Intercept	-0.22** (0.07)	-1.87*** (0.16)	-2.33*** (0.24)	-2.36*** (0.25)
North-west/South and Islands	-0.52*** (0.12)	-0.77*** (0.13)	-0.75*** (0.13)	-0.75*** (0.13)
North-east and Centre/South and Islands	-0.17 (0.11)	-0.21 (0.12)	-0.19 (0.13)	-0.19 (0.13)
Female		-0.20 (0.11)	-0.21 (0.11)	-0.21 (0.11)
Father's education		0.18*** (0.02)	0.19*** (0.02)	0.19*** (0.02)
Father's occupation		0.009*** (0.003)	0.009** (0.003)	0.009** (0.003)
Cohort 40-49 (cohort 30-39)			0.50* (0.21)	0.51* (0.21)
Cohort 50-59			0.59** (0.19)	0.59** (0.19)
Cohort 60-65			0.18 (0.20)	0.19 (0.20)
Farm origin				0.08 (0.17)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level

The lower likelihood of attending university of North-westerners could depend on different educational choices made at upper secondary level. The descriptive statistics show (figure 6.4.) that, in the birth-cohort 1960-65, a higher percentage of people in the North-west attended shorter vocational tracks, and the majority of these do not lead to university. More generally, there is a higher percentage of people attending non-academic tracks in the North-west (77.3% of the total number of upper secondary school attenders) than in the South (70.2%). This higher orientation towards taking vocational-technical training could negatively affect the decision to enter university.

The analysis of the transition from upper secondary school attendance to university attendance with the introduction of "tracks" as an independent variable confirms this hypothesis (table 6.8.). Due to limitations of the dataset, the effect of "tracks" on the chances of attending university can only be measured for people born between 1960 and 1965 (see chapter 4). When only "place of residence" is introduced in the model no significant regional differences emerge in the transition to university. However, after controlling for social origin and gender, living in the

North-west instead of the South significantly reduces the likelihood of going to university. This is the same result as for the larger cohort of people born between 1930 and 1965 (table 6.8.). This significant negative effect declines when the variable for "tracks" is included; this is because North-westerners are more likely, ceteris paribus, to attend vocational-technical training which has a negative effect on university attendance. Once track differences are controlled for the regional difference disappears. In the last model, in which the interaction effects between regions and tracks are introduced, it is possible to verify which tracks greatly reduce the likelihood of going to university of people from the North-west: they are the technical and the vocational schools (the coefficient of this last track is very close to being significant).[4]

Table 6.8. The transition from upper secondary school attendance to university attendance - cohort 1960/65

	Model 1	Model 2	Model 3	Model 4
Constant	-0.35** (0.13)	-2.41*** (0.32)	0.82 (0.51)	0.51 (0.55)
North-west/South	-0.34 (0.21)	-0.62* (0.24)	-0.26 (0.30)	1.01 (0.80)
North-east-Centre/South	-0.05 (0.20)	0.009 (0.22)	0.11 (0.28)	0.51 (0.63)
Female		0.21 (019)	-0.03 (0.25)	0.004 (0.26)
Father's education		0.19*** (0.04)	0.14* (0.05)	0.13* (0.05)
Father's occupation		0.006 (0.005)	-0.006 (0.007)	-0.006 (0.007)
4 years tracks(1)/ Academic schools			-2.46*** (0.41)	-2.48** (0.64)
Vocational schools/ Academic schools			-3.01*** (0.40)	-2.39** (0.64)
Technical schools/ Academic schools			-2.52*** (0.33)	-1.95*** (0.43)
North-west*4 years schools				-0.53 (1.07)
North-east-Centre*4 years schools				-0.22 (1.02)
North-west*vocational schools				-2.15 (1.14)
North-east-Centre*vocational schools				-0.45 (0.93)
North-west*technical schools				-1.91* (0.96)
North-east-Centre*technical schools				-0.71 (0.75)

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level

(1) Students who complete these schools must attend a supplementary year and make a final state examination to enter university.

[4] Another model was run in which the interaction effects between "place of residence" and the variables for social origin and gender were introduced. None of the variables were significant.

To summarise, the results of the logit model analysis of educational transitions confirm the previous descriptive statistics and add some more information on the effect of location on educational decisions. People in the South are less likely to go to lower secondary school than people in the North and Centre however when the interaction effects are introduced in the model this disadvantage disappears. This stresses regional differences in the way some factors, such as farm origin, gender, father's education and cohort, affect educational decisions. No differences among the three areas are found relative to the second transition point, that is from lower secondary school attendance to upper secondary school attendance. Finally, Southerners are more likely to attend university than people from North-west but, differently from the conditional probabilities of attending lower secondary school, this positive effect does not depend upon gender or social origin. The regional differences in the choice of attending different tracks at upper secondary school accounts for this lower propensity of North-westerners to continue education at university. They mainly attend short vocational tracks which do not lead to university or non-academic tracks. Moreover, North-western students who attend 5-year vocational and technical schools have a lower probability of going to university, compared to the students from the academic schools, than Southerners attending the same tracks. The higher chances of dropping-out after gaining the school-leaving diploma is explained by the higher probability that Northerners will be employed in the industrial sector.

8. Regional differences in the occupational returns to education

The analysis of the occupational returns to education in different regions throws light upon the reasons which induce Southerners to make different educational decisions from Northerners. Using the same methodology applied in chapter 5, an analysis of the marginal and total occupational returns to education is presented in this section. The variable "place of residence" is introduced among the other independent variables which measure the effect of different educational levels, social origin, gender and birth-cohort, on the prestige level of the first job.

In the first model of the marginal returns analysis no regional differences emerge (table 6.9.). Living in the North-west, or the North-east and Centre instead of living in the South reduces the occupational returns but not significantly. To measure whether education offers higher or lower occupational benefits in different parts of Italy the interaction effects between each educational level and the three areas are included in the analysis.[5] The only significant interaction effect is between living in the North-west and lower secondary school qualification. More precisely, the marginal returns to lower secondary school qualification are significantly higher in the North-west than in the South. To gain a lower secondary school certification in the North-west seem to be an important condition for reaching a higher occupational status compared to those who have just attended lower secondary school, but it is not in the other parts of the country. Attending university and gaining a university degree add significant occupational returns relative to the previous educational levels and these returns are lower in the North-west than in the South but this difference is not significant.

[5] In both the analyses of the total and marginal returns, another model was also estimated in which the interaction effects between "place of residence" and the gender, social origin and birth-cohort variables were introduced. None of these interaction effects were significant which testifies that there are not regional differences in the way these independent variables affect individual occupational returns.

Table 6.9. Marginal returns to different educational levels

	Model 1	Model 2
Constant (illiterate or no qualification)	10.723***	10.038***
	(1.458)	(1.649)
Primary certificate	0.999	1.402
	(1.481)	(1.818)
Lower secondary school attendance	2.841	5.870
	(2.348)	(4.723)
Lower secondary school certificate	2.873	-1.989
	(2.408)	(4.817)
Upper-secondary school attendance	3.886	5.574
	(2.016)	(3.168)
Upper-secondary school certificate	16.971***	17.777***
	(1.988)	(3.099)
Univerity attendance	8.658***	9.155**
	(2.040)	(2.588)
University certificate	15.644***	17.060***
	(2.298)	(2.927)
North-west/South-Islands	-1.133	-4.528
	(0.906)	(4.719)
North-east-Centre/South-Islands	-1.251	3.527
	(0.867)	(3.289)
Father's education	0.556**	0.578**
	(0.155)	(0.156)
Father's occupation	0.186***	0.186***
	(0.020)	(0.020)
Female	-1.612*	-1.833*
	(0.734)	(0.736)
Cohort 40-49	-2.545**	-2.501**
	(0.912)	(0.914)
Cohort 50-59	-6.516***	-6.323***
	(0.950)	(0.954)
North-west*Lower secondary school certificate		12.767*
		(6.382)
North-west*Univerity attendance		-3.506
		(6.954)
North-west*University certificate		-3.879
		(7.484)
R square (adj.)	0.555	0.558

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Note: the last model controls for all the interaction effects between "place of residence" and educational levels.

The analysis of the total returns to different educational qualifications once again show that living in the North-west or in the North-east and Centre versus the South does not make any difference in terms of occupational returns (table 6.10.). However, when the interaction effects between "place of residence" and the various educational certifications are in the model it comes out that the overall occupational benefit a person gains from acquiring a university degree is significantly higher in the South than in the North-west. This result suggests that the higher investment in university education, which characterises the Southern regions, is justified by higher

occupational returns. No differences in the returns to diplomas from different tracks emerge among regions.

Table 6.10. Total returns to different educational qualifications

	Model 1	Model 2
Constant (no or primary qualification)	11.538***	11.147***
	(1.068)	(1.140)
Lower secondary school certificate	4.631***	3.436*
	(1.050)	(1.563)
3-4 years schools	19.144***	19.136***
	(1.326)	(1.984)
Istituti Professionali	27.046***	29.854***
	(1.891)	(3.091)
Istituti Tecnici	31.194***	33.913***
	(1.478)	(2.113)
Licei	28.402***	26.931***
	(2.137)	(2.979)
University certificate	48.481***	51.324***
	(1.645)	(2.130)
North-west/South-Islands	-1.336	-1.317
	(0.906)	(1.330)
North-east-Centre/South-Islands	-1.244	-0.059
	(0.871)	(1.260)
Father's education	0.680***	0.693***
	(0.156)	(0.158)
Father's occupation	0.195***	0.197***
	(0.020)	(0.021)
Female	-0.452	-0.581
	(0.761)	(0.763)
Cohort 40-49	-2.088*	-2.132*
	(0.921)	(0.923)
Cohort 50-59	-5.967***	-5.964***
	(0.972)	(0.974)
North-west*University degree		-7.923*
		(3.628)
R square (adj.)	0.542	0.543

*significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Note: the last model controls for all the interaction effects between "place of residence" and educational levels.

9. Conclusions

This chapter analysed the regional differences in educational participation rates and attempted to discern whether the existence of regional diversities is due to the effect of factors such as social origin, gender and birth-cohort. The assumption behind this analysis is that the low educational attainment rates in Italy may depend on an unequal distribution of educational participation rates among the regions. Indeed the Thesis of Industrialism suggests that people living in more industrialised

areas acquire higher educational levels because education is one of the most important credentials in the job allocation process.

Both descriptive statistics and logit model analysis indicate that geographical differences do not have a relevant role in explaining the low levels of educational attainment in Italy. Southerners do bring down the average educational attainment in Italy, although they do not explain the very low rates of educational attainment compared to the other OECD countries. This is because a relatively high proportion of Southerners drop-out of schooling very early, at elementary level. Thus a lower percentage of Southerners pass on to lower secondary education than in other areas. This is no longer true in the transition from lower secondary to upper secondary school where there are no significant differences among regions. Finally, in the transition from upper secondary school attendance to university attendance Southerners do significantly better than people from the North-west.

The Thesis of Industrialism does not seem to provide an adequate explanation of the Italian case. It is true that on average residents of the North-west are more educated than residents of the South but this theory cannot account for the higher propensity of Southerners to attend university and graduate. One of the main reasons is that the economic situation of the South does not exactly fit the idea of the underdeveloped economy described by the Thesis of Industrialism. According to this thesis in an underdeveloped economy a lot of jobs (more than in a developed economy) are allocated by inheritance and for this reason education is a less important factor in the labour market. This does not seem to be the case for the South of Italy. The main difference between the North and South is the availability of jobs in the competitive market. When available jobs are scarce, as in the South, one might expect that individuals invest in education to be more competitive (Thurow, 1975) or to avoid being unemployed (Parking theory). This different perspective offers a more adequate explanation for the high rates of university attendance in the South. Indeed, the general statistics on unemployment rates show that in the South university graduates suffer a much lower risk of being unemployed than less educated people (figure 6.1.). Moreover, the choice by Southerners to go to university seems to be linked to job prospects which are not strictly related to the

private sector. Among young people looking for a job 58% go to private firms in the South compared to 75% in the North. The rest of them go to *Ufficio di Colloccamento*, take part in public competitions to be employed in public administration, or enter a free profession (Censis, 1997). These data confirm that education in the South is very important as a credential for employment and less important as an instrument for acquiring occupational skills (Collins, 1979).

In the light of above mentioned considerations the higher rate of dropping-out after completing elementary school in the South may appear contradictory. In reality it is not.

First of all, because of the disadvantaged economic and cultural conditions in which a lot of families live it is not surprising that children from these families do not invest in education. The high costs associated with continuing education - especially the loss of earnings, due to the fact that pupils cannot work if they are studying - the low family expectations towards education and the importance of school success for the future of their offspring, all negatively influence the choice of attending school. In this culturally and economically disadvantaged environment very young people (especially boys) leave school to find a job and indeed they easily find one as a shop-boy or manual worker. Occupational problems appear later when young people of the successive generation take their place and those employed originally cannot find another job.

Secondly, the lack of a large number of jobs in the industrial sector reduces the occupational opportunities of people with a medium-level education. In between low skilled jobs and highly skilled ones there are not a lot of other employment possibilities. Thus, to stay longer at school after having acquired basic literacy is probably not worthwhile for people who cannot or do not want to complete the higher levels of education. On the other hand, in this economic situation where job prospects for those poorly educated are particularly bad and for diploma holders scarce, university education offers the only means for upward mobility to people who cannot rely on family estates. Indeed, from the analysis of occupational returns to education it emerges that the occupational returns to university are significantly higher in the South than in the North-west.

Moreover, the prospect of migration does not seem to affect Southerners' educational decisions. Today there is a lower propensity to migrate than in the past due to higher family incomes and standards of life. In the past, migrations were determined by the extreme poverty of people living in the South and the main purpose was to find the means for surviving. The migrants were people with low levels of education who aspired to work in the large industries of the industrial triangle of Milan-Turin-Genoa. Today the conditions for surviving in one's own place of residence are guaranteed and the costs of migration[6] have also increased, thus less people in the South find it convenient to leave their region. A new migration, composed of highly educated people searching for better employment prospects, could take place. However, the ISTAT survey of the labour force pointed out that the disposition to migrate of diploma holders was higher in the South than in the North-Centre but it was lower in the case of university graduates (Reyneri, 1997). They prefer to wait a long time and find a good job in the South (thanks to family support) instead of migrating to the North, which involves economic and psychological sacrifices.

On the other side of the story there is the North which does not show high levels of educational attainment either, especially if compared to the other industrialised countries. One reason is that Italian firms have scant need for highly educated labour forces. This is one of the main findings of a survey conducted by Unioncamere (Censis, 1997). In the previsions for the year 1997-98, entrepreneurs expected to employ people with an educational level not higher than a vocational qualification in two-thirds of the newly created jobs. According to the same study the demand for university graduates would have been around 7%. However, large differences in job opportunities exist within the North. It is especially in the North-east of Italy that the demand for highly educated workers is very low because the small- and medium-sized firms are still based on labour forces with few qualifications. Greater employment opportunities for those who have a compulsory schooling certificate or a diploma from upper secondary school together with the

[6] The costs of living in the North-Centre are higher than those living in the South, not only because renting a house, shopping and public transport are more expensive, but also because migrants cannot rely upon family resources such as the parents' house and income.

low demand for highly skilled people explain Northerners' low level of investment in education.

To conclude, the existing regional disparities in educational choices are the result of different individuals' strategies linked to the economic situation of their territory. However, they do not account for the national low levels of educational attainment, even though they throw light upon the reasons why Southerners and Northerners invest a great deal in education.

CHAPTER VII

CONCLUSIONS

1. Introduction

Why has Italy one of the lowest levels of educational attainment among OECD countries? The present thesis aimed to find explanations for this situation through the analysis of the main factors affecting individual educational decisions. As pointed out in the introductory chapter, the poor educational performance of Italians is particularly interesting because it appears to be incongruous with the positive economic performance and the apparent openness of the Italian educational system. A highly industrialised economy and an educational system which does not have any formal obstacles to the continuation of studies can be considered favourable circumstances for increasing investment in education. Why is this not the case in Italy?

To answer this question one must search for the reasons which make Italy a "singular" case. Are some factors operative only in Italy? And, if they are not, why do not they produce the same outcomes in other countries? All the thesis has focused on Italy, however, in this conclusive chapter, after a brief summary of the original hypotheses and the results of the empirical analyses, some of the main findings are analysed in a comparative perspective. I suggest that the national specificity depends on the particular combination of individual and institutional factors (school and labour market) which determine lower educational achievement in Italy.

Finally, some considerations about the implications of the thesis' results in practice are discussed. This is a particularly interesting period for educational reforms in Italy. Two years ago a project of reform involving the entire structure of the Italian educational system was presented by the newly elected leftist government. Since then a lively and conflicting debate has continued. I will speak about the policy implications of my empirical findings, trying to make a contribution to the debate on school reforms and, more generally, on the way to advance policy

and improve school outcomes. In addition, I will present the projects of reform which are object of present discussions.

2. A summary of the main empirical results

The present thesis has adopted both the Structuralist and the Rational Choice point of view with the aim of discovering which of these two approaches could better explain the Italian case. It has emerged that, separately, the two theories cannot account for the low levels of educational attainment in Italy. A satisfactory account requires elements drawn from both approaches.

Related to the Structuralist thesis, there is a confirmation of the hypothesis that social differentiation in education has not ceased but has found other ways of operating. Among ascriptive factors, only gender differences has declined over time while the effect of social origins has remained strong even today. Moreover, the Italian educational system has been found to work in a way which discourages a great proportion of pupils from embarking upon a long educational career. The "selectivity" of the academic schools and their general content - which does not teach any specific skill directly applicable in the labour market - lead to only a "privileged" (because they mainly come from middle class) minority of student population entering these tracks. All other students attend vocational and technical training which are characterised by higher chances of failing and lower chances of entering and succeeding at university.

On the side of the labour market there are very contrasting signals: more educated people earn more and have higher occupational positions, but suffer from high unemployment rates at the beginning of their occupational career. Thus, in the Rational Choice perspective we can partly explain why, even if the occupational returns to education are high in the long term, people do not invest in education as we would expect. Indeed, in the short term, the long period spent at university before acquiring the final *laurea* and the high unemployment rates of young graduates make the choice of attending university particularly costly. A confirmation of this interpretation comes from the analysis of the rates of transition from upper

secondary school to university and the rates of university success. The proportions of people entering university and succeeding vary greatly among different social classes. Only children from the most advantaged social classes (free professions and service class) have high values for both while the others have lower values (table 5.8.). This may affect the formation of the subjective expectation of success at university: the fact that only a small proportion of non middle class students go to university and succeed could reinforce the conviction that it is very difficult to succeed at university. A self-reinforcing mechanism, acting within social classes and between generations, would create a "low-educational-attainment equilibrium". In this equilibrium the low rates of entry and success at university which characterise all social classes, with the exception of middle class, discourage the majority of young people from acquiring the university degree.[1]

In this Rational Choice perspective, the choice of attending vocational and technical training by the majority of young people can also be interpreted as the choice of less risky options. They protect themselves from the risk of exclusion from the labour market by acquiring a more specialised diploma and maintain or even improve their class of origin (Breen and Goldthorpe 1997).[2]

Lastly, the analysis based on the Thesis of Industrialism has demonstrated that regional differences in educational attainment rates do not explain the low levels of educational attainment in Italy. Both the South and the North contribute to low the national educational attainment rates.

To conclude, individual characteristics together with institutional factors (both educational and occupational) operate in the same direction, that is depressing the national rates of educational attainment. More specifically, individuals' social class of origin, the structure of the Italian educational system and occupational market prospects are the most important factors in explaining the low educational attainment rates. On the other hand, gender and regional differences do not emerge as having a significant part in the story. This is because young women are nowadays

[1] For a more detailed explanation of the "low-educational-attainment equilibrium" see chapter II pp.54-55

[2] Considering that the parents of the vast majority of Italians born between 1930 and 1959 had only compulsory education (chapter V, table 5.3.), for many people gaining a diploma from these schools is already a big step ahead.

even more educated than men. In addition, Southerners, even though they have higher compulsory schooling drop out rates, are still more likely to attend university than people living in the North-west of Italy.

3. The results in a comparative perspective

The present thesis has focused only on the Italian case, however, the assessment that Italy has lower level of educational attainment than the other OECD countries requires an answer which defines the "singularity" of Italian situation in comparison with the other OECD countries. Referring to what is known from the literature and the official statistics I will try to answer three questions which arise from the explanation of the Italian case:

1. Is social selection in education stronger in Italy than in other countries?
2. Are the high rates of failure at upper secondary and university level an Italian peculiarity?
3. Do occupational returns to education differ between Italy and the other developed countries?

3.1 Social selection in education

In most countries social origin is still a differentiating factor in individual educational achievement. With the exception of Sweden and the Netherlands, where its effect has declined over time, this result emerges from research carried out in thirteen countries (Shavit and Blossfeld, 1993). "The stability in the association between social origins and educational transitions in eleven of the thirteen societies indicates that educational selection persistently favours children of privileged social origins" (p.21). In this respect Italy does not differ from the other countries.

Moreover, even though in all countries under examination there has been an expansion in the attendance of upper secondary education, in some countries (Germany, Switzerland, Sweden, Poland and Israel, for Israeli Jews) this expansion has led to a growing differentiation into academic and vocational tracks. Vocational

tracks have incorporated over time the growing proportion of children from lower social classes who entered upper secondary school. These students, after gaining the school-leaving diploma, do not continue in higher education but directly enter the labour market. The analysis on tracking presented in this dissertation showed that this also happens in Italy: the growth in upper secondary school attendance took place in vocational and technical tracks. However Germany, Switzerland, Sweden and Poland have much higher rates of graduation from upper secondary school and university than Italy (OECD, 1997).

This brings us to the second question related to the rates of school success.

3.2 The rates of school success

The official statistics show Italy does not substantially differ from the other OECD countries in the enrolment rates but it does in the completion rates for upper secondary school and university. In the population aged 14 years old the enrolment rate at upper secondary school exceeds 90% (ISTAT, 1996). However, according to the OECD data (1997), among those aged eighteen years old only 67% has acquired an upper secondary school diploma while the OECD country mean is 80%. This is important evidence. It has already been pointed out that the phenomenon of dropping-out before the completion of upper secondary school is more likely to occur in vocational and technical tracks.[3] The fact that these schools, which are generally considered "easier" than academic schools, have higher rates of failure can be viewed as the result of a combination of individual and institutional factors: a self-selection process on the part of students and their families (less motivated and culturally weak students attend these schools) together with the lower resources of these schools. The first factor (the individual one) is certainly not only a characteristic of Italy but also of other countries; it is generally recognised that vocational training is mainly addressed to less advantaged children, with the aim of

[3] It would be interesting to compare data on school failures by track in Italy and Germany. As previously mentioned, the attendance rates in vocational and academic tracks in these two countries are very similar. However, Germany has higher educational attainment rates. This seems to suggest that success rates in different tracks in Germany are higher than in Italy. It has not been possible to

providing them with some specific skills which enable them to find a job. The second factor (the institutional one) could be a national peculiarity. I am not aware of the existence of any comparative research on the quality of the programs and the resources employed.[4] However, we can expect that in some countries, like Germany, Austria, Denmark and the Netherlands, where there is a lot of emphasis on the importance of vocational training and the link between the education system and the labour market is very strong (trough apprenticeships and workplace-based programs), significant resources are involved. This means that vocational training is well organised because it is considered crucial for the productive system. In the Italian case the links between education and the labour market are very poor and vocational training is often addressed at improving the general knowledge of "weak" students rather than to providing "marketable" skills.

At university level there is the same phenomenon of high rates of enrolment and low rates of completion. Thus, in 1992 in Italy 41.3% enrolled in university. This is high when compared to the OECD country mean (28.2%), and to the percentages in Germany, France and the United Kingdom (ISTAT, 1996, p.15 prospetto 5). However, the rates of university success are very low in Italy: in the academic year 1995-96 only one third of those enrolled 6 years before (academic year 1985-86) had graduated. Individual and institutional factors can explain this: part of the student population enter university without being really motivated to acquire a university degree. For example, they may wish to avoid being unemployed and to delay the military service, in the case of men, some students use enrolment at university as an instrument to escape from undesired situations.

On the part of the institutions, there are some negative features of the Italian university system which reduce the general levels of university success.

First of all, the lack of alternatives to long university programs at tertiary level induces all the people who want to continue their studies after the diploma to enter university. Even if recently in Italy some shorter degrees (*lauree brevi*) at

find comparable data about Germany on drop-out rates by track and verify whether a similar phenomenon can also be found in Germany.

[4] Usually, some indirect measures of the productivity of the educational system - percentages of graduation or levels of pupils' literacy or knowledge - are used to assess the efficacy of the resources employed at school level. Noteworthy is the lack of data on pupils' literacy in the case of Italy.

university have been introduced, they are still attended by a minority of students. The OECD publications point out that "countries whose tertiary education systems offer only long university-levels programs have, in general, significantly lower overall university-level graduation rates than those that also offer shorter university-level programs" (1997, p.328). For example, the first university degree graduation rate in Germany is 16, about half of the first university degree graduation rates in Australia (34), the United Kingdom (31) and the United States (32). This also applies to Italy, the first university degree graduation rate is 11 but only 1% of the young population graduates in short university-level programs. Moreover, the popularity of non-university tertiary education is very low compared to other countries: Finland, Japan, Norway, Switzerland, and the United States have rates of graduation above 20 while in Italy the corresponding rate is 7. This result depends on a variety of factors including: the availability of technical and professional education at the tertiary level in a particular country; the link between this type of tertiary education and job prospects; and the extent to which vocational programs of a similar content are (or are not) offered at the upper secondary level.

One important consequence of the prevalence of long university programs in Italy is the overcrowding of many universities, particularly in cities like Milan, Rome, and Turin.[5] In this situation teaching becomes very difficult, especially when it is not supported by an adequate infrastructure, and almost no personal contacts between professors and students are possible.

Secondly, the student population is a very heterogeneous universe because university is open to students with very different backgrounds. It has already been pointed out that students from *liceo* are more prepared for university studies than students from the vocational and technical tracks, and this can contribute to making university very "selective" against the latter group of students.

Thirdly, there is not any serious system which helps students in deciding the courses to take at university. Thus, mistakes in the choices of in which faculty to enrol or which subjects to study are very common.

[5] It is today widely recognised that the overcrowding of many universities represents a serious problem for their efficiency. To solve this problem and to better satisfy the demand for education in Milan a new university, called *Bicocca*, has been recently constituted.

The last question to be answered is related to the differences between Italy and other OECD countries in the occupational returns to education.

3.3 Occupational returns to education

In Müller and Shavit's comparative study (1998) Italy, as well as the other twelve countries under examination, shows a positive significant effect of education on occupational status. According to the magnitude of this effect, Italy ranks in an intermediate position between Germany and Switzerland, which score at the top, and Great Britain, Japan and U.S., at the bottom.[6] Moreover, when the effect of different qualifications on job entry-class is studied Italy scores with Germany and Switzerland. It is thus one of the countries where being more educated significantly enhances the odds of entering the service classes rather than the unskilled classes. Italy is also the only country in which any qualification above compulsory schooling helps individuals to avoid unskilled occupations. Thus, occupational returns, in terms of occupational status, to education are high in Italy, even higher than in other countries.

The returns to education are also measured referring to other parameters, one of the most common is monetary returns. We have seen that in Italy more highly educated people earn substantially more than less educated ones (chapter 5). Eurostat data (1998), show that gross earnings per month substantially differ between European Member States. The lowest median earnings are in Italy, Spain and Greece while the higher are in Denmark, Germany, Luxembourg and the Netherlands. However, earnings are more unevenly distributed in Italy than in other countries. Comparing the top professions (managers and professionals) to the employees category the first group earns over twice as much as an average employee in Italy, and under twice in France, Spain and Luxembourg. The countries which have a more equal distribution between these two groups are the Netherlands, Sweden and Finland (only 40% of difference between the two groups). Moreover, comparing

[6] The authors found that the association between education and occupational status is higher in those countries (like Germany and Switzerland) which are characterised by: (1) stratified educational

employees with different levels of education, it emerges that Italy is among the countries where the difference in earnings between employees with tertiary education and employees with upper secondary school diploma is higher. More precisely, an employee with a *laurea* earn 55% more than an employee with a diploma. Italy is preceded only by France with a difference in earnings between the two groups of 57% and is followed by Germany with 50% difference. The difference in the average earnings between upper secondary school graduates and those with compulsory school or less is generally lower than the difference in earnings between the two top educational levels. However, after Luxembourg (41%) and Spain (28%) Italy is again among the countries with the higher discrepancy in the average earnings of these two lower-qualified groups (26%). This suggests that, compared to other countries, in Italy higher levels of education lead to higher monetary returns.

The other aspect related to the occupational returns to different levels of education is the risk of being unemployed. In all European Community Members the problem of unemployment is especially linked to the first entry in the labour market. This emerges from a comparison between the unemployment rates of young people and old people (EUROSTAT, 1997). Higher rates of unemployment are registered for people under 25 years old than for people over-25, even if the proportions of unemployed in both categories vary greatly among European countries. In some countries, like Greece, Italy and Finland the vast majority of young people find a job after a period of unemployment while in other countries like Denmark, Germany and Sweden this occurs in a minority of cases. Italy is the only country in which the long-term unemployment rate of people aged under 25 overcomes 50%: 63% of young unemployed people have been looking for a job for more than twelve months (EUROSTAT, 1997). Moreover, looking at the data on long-term unemployment in the population aged between 25 and 29 by level of education, it emerges that the most highly educated people suffer the risk of being unemployed to a lesser extent than less educated people. This is also true for Italy, however the rates of long-term unemployment for university graduates are higher than in other countries: 57.4%

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systems; (2) a high level of vocationally-specific training; and (3) a low proportion of students attending tertiary education (p. 23).

versus 20.2% in France, 41.0% in the UK, 41.5% in Greece, 48.1% in Belgium, 49.6% in Spain and 49.8% in the Netherlands.

To summarise, compared to other countries, in Italy the occupational returns to education are high in terms of occupational status and earnings. Investing in education in Italy remarkably increases the chances of entering highly prestigious jobs and gaining high monetary returns. However, the beginning of the occupational career is particularly difficult for university graduates. Before entering their first job, they have a higher risk of being unemployed for a long period of time than university graduates from other countries.

To conclude, two main factors seem to negatively characterise Italy compared to other countries: (1) the selective effect of tracking which reduces the attainment rates at both upper secondary and tertiary level; and (2) the occupational returns to education which do not give a clear signal about the benefits of investing in education. Moreover, when the probability of failure is high the benefits associated to invest in education are even more uncertain. This reduces the attractiveness with investing further in education for the majority of young people, with the exception of the most privileged ones, reinforcing a "low-educational-attainment equilibrium" (see chapter II, section 4.2.).

4. Policy Implications

In light of the empirical results and the considerations presented in this dissertation three main issues can be called to the attention of the Italian policy makers: 1) the persisting influence that belonging to a certain class of origin has on individual educational outcomes; 2) the effect of tracking in perpetuating social inequalities in education and its other undesired consequences, that is the low levels of completion at upper secondary school and university; and 3) the weak links between the education system and the labour market. Each problematic requires some solution which ultimately could positively affect the general levels of educational attainment.

4.1 Thinking about social differences in education

Regarding the first issue, the evidence demonstrates that the educational reforms of the 1960s in Italy, which eliminated the formal barriers to entering different levels and types of education, did not succeed in reducing the effect of social origin in education. Social selection in education in Italy has changed its forms of manifestation: while in the past social selection operated at a vertical level, affecting the likelihood of progressing from one educational level to the following one, nowadays social differentiation mainly operates at a horizontal level within school levels and types. Thus, before the reforms, a few students from lower social classes completed compulsory schooling and entered upper secondary school. While, after the reforms, almost all students acquire the school-leaving certificate from lower secondary school and a large proportion of them now attend upper secondary school. However, the attendance of one of the different types of upper secondary school and the likelihood of completing it as well as the likelihood of succeeding at university is strongly biased in favour of middle class children. This does not mean that the reforms of the 1960s did not have any merit but they need some correctives to guarantee everybody, irrespective of social background, not only the possibility of entering education but also the possibility of succeeding. One way in which social reproduction operates in the Italian educational system is through the differentiated participation of children from various social classes in vocationally or academically oriented tracks. In this area some "adjustments" can be made.

4.2 A different way of conceiving tracking

Starting from the assumption that tracking is not "bad" in itself, but it becomes "bad" when ascriptive characteristics play a significant role in the process of students' allocation to particular groups, it is possible to find alternative ways of organising it to minimise the effect of social background. In this direction Gamoran's works offer a valid contribution which goes beyond the specific examination of the American case and can be used in the Italian case. According to

the results of his analysis school systems should be flexible, which means they should make the movement between tracks as easy as possible. This is because easy movement has been found to maximise the overall achievement of students and minimise inter-track differences in achievement (Gamoran, 1992). Moreover, schools should encourage a higher percentage of students to enrol in the college preparatory track (which corresponds to the Italian academic track) because the average level of academic achievement is higher in schools with a large college preparatory track (Gamoran, 1992). Gamoran found a confirmation of this last result in a recent study on the Scottish educational system (Gamoran, 1996). In Scotland the introduction of the S Grade, which expanded access to a core academic curriculum, reduced the connection between family background and attainment within schools and increased students' educational achievement. He argued that the increased access to academic study is beneficial for students from lower social classes because it opens the doors to more advanced studies and increases the pressure for access to post-secondary education. This in turn can lead to a greater equalisation of attainment in the future (p.17).

Both proposals seem to well suit the Italian situation. As has already been pointed out, the rigidity of the Italian educational system does not allow pupils to change the type of school without wasting time or allow one to study a combination of vocational and academic subjects. These two effects discourage continuation in education. Moreover, the low proportion of people attending academic tracks compared to the technical and vocational ones reduces the general attainment rates both at upper secondary school and university. It would seem that under a different track distribution of students the Italian educational attainment rates would be higher. A higher proportion of students attending academic tracks would very likely increase the proportion of people succeeding at upper secondary level and entering university with good chances to gain a university degree. The following exercise illustrates my argument. We can compute the proportion of Italians who would have entered university under a different track distribution of students, for example the French track distribution, and compare them to the actual probability of university entry in Italy. France here is an example of a country where there is a high

proportion of students attending academic schools, compared to Italy. The actual probability of university entry is expressed by (1) while the predicted probability under the French track distribution by (2):

(1) $Nv_I \times a_1 + Na_I \times a_2$

(2) $Nv_F \times a_1 + Na_F \times a_2$

Nv and Na are the proportions of students attending vocational and academic tracks in Italy (1) and France (2), and a_1 and a_2 the probabilities of attending university for students from vocational and academic tracks in Italy.[7] According to the Social Mobility Survey data among those born between 1960 and 1965 26% of students in upper secondary school attended the academic track and the other 74% attended the vocational tracks[8]. Because of the higher rates of failures and the lower likelihood of entering university, the proportion of students who attended vocational tracks and entered university is very low, 0.22. The corresponding proportion for students from academic tracks is much higher, 0.87. From (1) it can be shown that the actual percentage entering university in Italy, given the attendance of one of the two types of tracks, is 38.9 ($74 \times 0.22 + 26 \times 0.87$).

The official OECD statistics presented in Chapter I report that in France 47% of upper secondary students are in academic tracks and 53% in vocational tracks. From (2) the predicted percentage under the French track distribution is 52.55 ($53 \times 0.22 + 47 \times 0.87$). Even considering a lower probability of entering university from academic track than the actual one (i.e. a_2=0.70) and maintaining constant the low probability of entering university from vocational tracks (that is a_1=0.22) the French track distribution would lead to higher university attendance rates (44.56). Because students from academic education are more successful in completing their university program than students from vocational education, the increase in the proportion of people attending university from academic tracks would also lead to an improvement in the overall rates of educational attainment in Italy.

[7] These probabilities are assumed to be the same in the two formulae.

[8] Here the term vocational track is used to indicate non-academic tracks. It includes vocational, technical and the other shorter but vocationally oriented tracks.

On the other hand, vocational education should have the function which it was created for, that is to offer a more specialised and qualifying education for those who do not want to go to university. This means recognising the fundamental role that vocational education has for the improvement of the economy, and changing the idea that it is an education of lower importance and prestige, mainly addressed to students not "able" enough to succeed in academic schools.

To summarise three interventions are desirable in the Italian case:

1. A more flexible educational system, which allows movement from one track to another with the recognition of the years spent in the previous track and promotes integration of students from different tracks.
2. A growth in the attendance rate of academic tracks[9] to improve the chances that a higher number of students reach higher educational levels. This would lead to the elimination of the historical selectivity of the academic schools.
3. An increase in the prestige of vocational schools to realise "parity of esteem" among tracks (Raffe, 1997). This aim can be pursued improving the quality of teaching in vocational schools, increasing links with the labour market and rising the importance of post-secondary vocational education.

Advice from the OECD analysts goes in the same direction: "There is a need both to integrate general and vocational programs and to enable young people to move easily between different kinds of education, training and work experience during this period of their lives, rather than being channelled into narrow pathways" (OECD, 1997, p.9).

4.3 Alternatives to long university degree programs

At tertiary level there is a need for alternative programs to the traditional university system. The Italian university system, mainly based on long university degree programs, has been shown to be highly inefficient. Clear signals are the low graduation rates and the widespread delay in completing 4 or 5 year university

[9] An important part in this respect could be assigned to teachers. Through their advice they can push more people to attend academic schools. However, to do so, they have to abandon the traditional idea that only a very selected number of their students should enrol in these types of schools.

programs. One solution to the problem could be the introduction of a larger number of shorter university courses and non-university tertiary education. A larger range of opportunities, after the completion of upper secondary school, could probably divert many students from entering long university degree courses. Instead they would be offered the prospect of acquiring a tertiary certification more easily and in a shorter time period. However, for these other forms of tertiary educational qualifications to be successful they will have to be valued by employers. This leads to the last issue: the actual absence of links between the education system and the labour market in Italy.

4.4 Strengthening the links between the education system and the labour market

In countries, like Germany and Japan, the strong links between the education system and the labour market produce two main positive effects: it gives employers good information about students' skills and give students a good reason to exert effort in school. It is not by chance that these countries are characterised by high levels of educational attainment. In Italy, employers often complain that educational institutions do not provide the required skills and on the other side students often feel that they are not prepared to enter labour market after attending school. This is because the Italian educational system has privileged general content over vocational specific training, even in vocational and technical schools, thus reducing the ability of educational certifications to attest the capacities of potential employees. The introduction of a work-based training system and of tertiary vocational programs would make vocational training more responsive to labour market requirements. On the other hand, the immediate utilisation of the skills acquired would push people to value the importance of investing in education.

An important prerequisite for strengthening this education/labour market link is the creation of a network of information between schools and employers and between school and students and their families. Educational institutions must carefully spell out to parents and children the various available choices and the

consequences of each choice. Nowadays, the consequences of certain educational choices often become known after leaving education through individual personal experience. Better communication between the actors affecting individual educational and occupational allocation would make the details of a certain educational program and its outcomes less uncertain.

In the next section I summarise the main aspects of the new project of reform which has been presented by the actual centre-leftist government and some final considerations on it.

5. The new project of reform

This is a very interesting period in Italy because educational reforms projects have been presented and lively debated not only in the political arena but also within schools and intellectual groups.[10]

It is a common opinion that the Italian educational system is malfunctioning and inadequate to the new needs of the economy. Some educational institutions have remained unaltered for decades, an eloquent example is the structure of the upper secondary school that has not changed since the *Riforma Gentile* of 1923. In 1997 the Minister of Education, Luigi Berlinguer, presented a comprehensive project of reforms which aimed to solve some of the problems pointed out in this dissertation. The main points of this project are: the restructuring of the different cycles of education and the introduction of a longer period of compulsory education; the reform of the maturity examination; the introduction of financial and academic autonomy of universities; the creation of post-secondary vocational schools; and the recognition of the principle of parity among private and public educational institutions.[11]

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[10] An example is the *Commissione dei saggi* (literally, Commission of wise people) which was formed by intellectuals from different areas of interest to discuss and give advice about the content of the new designed school system.

[11] All the information about the reforms and the related debate can be found on the INTERNET in the web pages of MPI (*Ministero della Pubblica Instruzione*), www.istruzione.it , of MURST (*Ministero dell'Universita' e della Ricerca Scientifica e Tecnologica*), www.murst.it. The newspaper *La Repubblica* has a section dedicated to schools, www.repubblica.it/online/scuola, and another to universities, and www.repubblica.it/universita.

5.1 The restructuring of the educational cycles

The reorganisation of the different cycles of education consists of a radical change in the present structure of four cycles, elementary, lower secondary, upper secondary and university (see chapter 4). The original project presented by the Minister of Education abolished the lower secondary level and distinguished three main cycles: elementary, secondary and tertiary education. Compulsory schooling, lasting 10 years (from 5 to 16 years old), would have started with the last year of infant school (kindergarten) and continued to elementary level (6 years) and then secondary school for other two years. After the compulsory school period, those who wanted to continue in education could attend another three years of secondary education and finally enrol at university or non-university tertiary education.

This original project presented by the government was changed when it passed to the Parliament for the approval. The Commission VII of the Chamber of Deputies (*Commissione Cultura, Scienza e struzione*) has proposed a new project[12] in which compulsory schooling is extended of only one year (9 years in total), lasting from 6 to 15. It begins in the first year of elementary school, thus abandoning the original idea of making the final year of infant school compulsory. Elementary school lasts 7 years. One more year at the end of this cycle has been added to the 6 years of the original governmental project to satisfy a function of "orientation" for further educational choices. Secondary education lasts five years of which the first two are compulsory and the last three more specialised. The intentions of the proponents is a reduction in the number of types of upper secondary schools and their grouping into four main areas of study: classical, scientific, technical and technological, and artistic and musical. This last project of reform also distinguishes between compulsory schooling (*obbligo scolastico*) and compulsory training (*obbligo di formazione*). For those who decide to abandon school, after the first two

[12] In Appendix 3 there is a picture of the proposed new structure of the Italian educational system.

years of upper secondary school, attending vocational training or participating in an apprenticeship is made compulsory until the age of 18. [13]

Two innovations are particularly interesting at the upper secondary level: 1) the introduction of more flexibility through the possibility of moving from one type of track to another in the first two years and of taking practical experiences and stages outside school in the last three years; 2) the introduction of a system of "credits" which attest students' achievement for each year of schooling and can be used in cases of successive re-entry in the educational system or when moving from one type of school to another. The realisation of these measures should have a positive effect on Italian educational attainment rates. The possibility to change idea, moving from one track to another, and having a formal recognition of the school records achieved until that moment, is something new. This flexibility contrasts with the actual rigidity of the system. Similarly, the possibility of making a more concrete experience of working when still attending school can have a positive effect on both pupils and future employers. The first would be more motivated to learn, perceiving the applicability of the subjects studied, the second would finally assist and participate in the creation of the "long expected" links between the education system and the labour market.

The last innovation at upper secondary level is the reform of the maturity examination. The previous maturity exam, which was introduced in the 1960s, was characterised by two written examinations - a composition in Italian and an exam in one of the main subjects studied in each track - and two oral examinations – with the subjects usually being chosen by the students among four possibilities decided at central level. The examining commissions were composed by one president, four external teachers and one internal teacher.

The new maturity exam is a more extensive examination: three written exams - the first two remained more or less unaltered and a third exam organised as a series of quizzes on four subjects studied during the last academic year - and an oral exam on all subjects. The examining commission is now composed by one president and

[13] This is another difference with Berlinguer's project, which recognised a "right" to further (mainly vocational) education after compulsory schooling, but did not speak about a duty to continue training.

six or eight teachers (according to the type of secondary school), of which half are external and half internal to the school.

The reform of the maturity examination is the first manifestation of a strong criticism, which has recently arisen, against the principles which inspired the 1960s reforms.[14] During the 1960s, in response to student pressure, who claimed reforms in favour of equalisation of educational opportunities between men and women and social classes, any selection process in school was reduced to a minimum. Thus, the maturity examination was simplified and made easier and the university system was opened to everybody without distinctions based on educational achievement or type of school attended. Today there is a clear attempt to go back and to criticise the excessive openness of the system that has caused many negative consequences (see section 6 of this chapter).

5.2 The reform of university

The other turning point in the Italian educational system is represented by the reorganisation of the university system. In 1997 the Ministry of Education submitted a tripartite model which aligned the Italian university system with the Anglo-Saxon model. He proposed three levels of study at university: *laurea breve* (first degree), *laurea* (the traditional university degree) and *diploma di specializzazione* (diploma of specialisation). However, some months ago changes in the denomination and in the number of possible course options at university were presented in the *Regolamento sull'Autonomia Didattica* (Regulations on Academic Autonomy): the *laurea* (first degree), lasting three years, *laurea specialistica* (specialised degree, a second level degree), lasting five years (three years for *laurea* and two more years), *diploma di specializzazione* (diploma of specialisation), lasting five or six years (which include three years for *laurea* and/or three plus two years of the *laurea specialistica*) and *diploma di dottorato di ricerca* (Ph.D.). Universities can also organise some one year *corsi di perfezionamento scientifico* (courses of scientific

[14] It is noteworthy that both the process of reform of the 1960s and the actual one have been carried out by a centre-leftist government. However, the principles which inspired these reforms are very

specialisation), subsequent to the *laurea* or to the *laurea specialistica*, which lead to the acquisition of a *master*.

The complexity removed from upper secondary level (through the reduction in the number of school types) seems to come back at university level. Educational offer, as emerges from the *Regolamento*, is very diversified but, at the same time, it is hard to understand what distinguishes *laurea specialistica* from *master* or *diploma di specializzazione*. It is positive that students can choose among a larger range of options, however such a complex system can create confusion. In my opinion the previous tripartite model (first degree, second level degree, diploma of specialisation) was preferable because it proposed a more diversified system than the present one. Furthermore, it was more clear and in line to other educational systems in Europe.[15]

A system of credits is also envisaged at university level: in each academic year on average a full-time student should gain 60 credits. This system guarantees the possibility of student mobility from one faculty to another and from one university to another, and the possibility of re-entering the educational system after a period of working. Ultimately, the acquired credits can serve as an important documentation for employers who want to know the courses taken and the final results of potential employees.

Regarding non-university tertiary education, mainly post-secondary vocational training, the *sistema dell'Istruzione e Formazione Tecnica Superiore* (IFTS) has been established. This can be attended by those who graduated from secondary schools. The management of the IFTS courses has been delegated to the Italian Regions but they must collaborate with universities, secondary schools, public research institutes and other agencies involved in vocational training (law 144/99). Apart from these general notes, it is still vague how these courses will be organised.

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different: in the 1960s, the equalisation of educational opportunities and, in these last years, the efficiency of the educational system.

[15] The importance of making the Italian educational system more similar to those of other European countries is not a trivial issue. European Community pushes towards a certain harmonisation in the European educational systems (even respecting some national specificity). One reason in favour to this process of harmonisation is to make the recognition of educational certifications around Europe easier.

Finally, another focus of long and controversial debates has been the recognition of the principle of parity among private and public educational institutions. Simplifying the question, this recognition would create a national system composed of public and private schools. The private schools will be equalised with the public ones according to a series of criteria they have to conform to. From the student side this would mean that they would be free to choose whichever school (public or private) they desire without differences in the sustained costs.[16]

Almost all the measures described are still debated. The reorganisation of the educational cycles as well as many other points of the project of reform have not yet been approved by the Parliament and implemented. Due to the problem of finding a large consensus between the ruling parties (sometimes also between them) and the oppositions, there has been a fragmented conduction of educational reform (Santagata, 1998). Thus, a few reforms have been introduced in practise: the extension of compulsory schooling (9 years);[17] the introduction of compulsory training for those who decide to leave education after the period of compulsory schooling; the reform of the maturity examination; and the legislation on the university autonomy.

6. The pending questions

Some of the measures above described are in agreement with the policy interventions suggested in the previous section. Probably under the pressure of the always more frequent comparisons with the other developed countries, Italian politics seems to have realised the main limits of the actual "obsolete" educational system and is trying to create a new one. The attempt to have an organic project

[16] Although this principle seems to have been accepted, after many conflicts and student public manifestations, the problem of implementing it has not been solved yet. Some speak about the introduction of a "bonus" to assign to every family, without distinguishing between families which enrol their children in public or private schools; others speak about the institution of scholarships or tax reliefs for those who choose private schools.

[17] This limited extension, one year instead of the original two years, is also the result of a compromise between the ruling majority parties and the opposition.

which comprises all the educational levels is surely commendable. In addition, it has raised new interest in the creation of stronger links between the education system and the labour market. However, it is unfortunate that the lack of agreement among different parties makes impossible to push through all of the reform. This leads to long approval times for the single parts of the reform and compromised decisions which are often less courageous and effective than the original intentions.

Moreover, some problems are still open, and there is no solution in the proposed legislation.

First of all, while the 1960s reforms put a lot emphasis on the necessity of guaranteeing equality of educational opportunities, the new project does not even mention this problem. Paradoxically, reformers behave as if all the problems linked to social inequalities in education have been solved or will be solved by introducing the new system.[18] In my opinion, this is a mistake. One example makes it clearer why this problem will not be solved by the new system. Relative to the accomplishment of *obbligo di formazione* until age 18, it is very likely that pupils will choose between the final three years at secondary school and the more practical formation, i.e. through apprenticeship, in relation to the differentiated costs and available resources. Thus, social selection which nowadays occurs at secondary level between vocational-technical tracks and academic ones will come up again in the new educational organisation. The new system may have the positive effect of increasing the proportion of people remaining at school or in vocational training, but it will not eliminate social differences in the chances of choosing between school-based or work-based educational system and the chances of continuing to university. Moreover, making training compulsory until age 18 means that reformers have to provide some kind of compensation for the lost earnings during the training period. Otherwise, many students from less advantaged social classes will drop out.

At university level the phenomenon of *fuori corso* has not be called into question. The question is: what happens to those students who fail or pass few examinations in each academic year? Are they left out from the system or they can remain in it? The new project does not tackle the question.

In order to solve the problem of massive enrolment and low graduation rates in the universities, some tendency to go back to a more selective university system is emerging. Thus, they are discussing whether to introduce "restricted" entry in some faculties and "conditioned" entry in all faculties. In the last case, the entry is "conditioned" on the acquisition of the necessary credits related to the chosen area of study.

While the first measure is justified by the need to find a correspondence between demand and offer for some professions (like doctor or veterinary) and by the limited availability of infrastructure for training, the second is a more preoccupying measure. The Minister of University and Scientific Research, Zecchino, has declared himself in favour of the abolition of free university entry. He supports the idea that those who have studied at technical or vocational schools can directly enter the scientific faculties but they cannot enter the other faculties, such as the humanistic ones. They can remedy this situation by studying the subjects which are considered important in the faculty chosen and obtaining the necessary credits or by passing an examination. The same, but for different subjects, applies to those from classical studies. This measure should cause concern because the link between the subjects studied at school and those at university is not always clear. For example, which students would have direct access to the faculty of Law or Medicine? I believe that some kind of discriminatory selection would come out from the introduction of this measure. An alternative would be to ask for a more general examination when entering university, without distinguishing between students coming from different schools. [19]

Moreover, when the new system, which provides alternative options to long university programs, will be introduced, the situation should appear very different from the present one. More people should attend non-tertiary or short university programs, so the problem of selecting people for entering the long university degree programs would be solved by itself (a sort of auto-selection).

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[18] In a less optimistic view, one could say that the achievement of the principle of equalities of educational opportunities is no longer on the Italian political agenda.

[19] Recently, it has been decided to let each university decide upon the requirements it sets for its students.

The new educational system, emerging from the project of reform, with the limits previously pointed out, presents positive aspects, like the introduction of a larger range of educational alternatives and a stronger connection between schools and the labour market. However, the consequences of these changes can only be partly anticipated, future research will evaluate whether Italian reformers are taking the right route in improving Italian educational outcomes.

APPENDIX 1

Table A.1.1 Percentage of the population aged 25 to 64 by the highest completed level of education (year 1995).

Countries	Primary and lower secondary education	Upper secondary education	Non-university tertiary education	University education
Canada	25	28	30	17
United States	14	53	8	25
Australia	47	29	10	14
Korea	40	42	-	18
New Zealand	41	34	15	10
Austria	31	62	2	6
Belgium	47	29	14	11
Denmark	38	42	6	14
Finland	35	45	9	12
France	32	50	8	11
Germany	16	61	10	13
Greece	57	25	6	11
Ireland	53	27	10	10
Italy	*65*	*27*	-	*8*
Luxembourg	71	18	-	11
Netherlands	39	39	-	22
Portugal	80	9	4	7
Spain	72	12	4	12
Sweden	25	46	14	14
United Kingdom	24	54	9	12
Czech Republic	17	73	-	11
Norway	19	53	11	18
Poland	26	61	3	10
Switzerland	18	61	12	9
Turkey	77	15	-	8
Country Mean	*40*	*40*	*9*	*13*

Source: OECD (1997) Education at a Glance.

Table A.1.2./A.1.3./A.1.5. Percentage of the population who have completed at least upper secondary education, by age groups (1995).

Countries	Age 25-34 (a)	Age 35-44 (b)	Age 45-54 (c)	Age 25-64 (d)	Age 25-64 (e)
Canada	84	80	71	54	75
United States	87	m	m	m	86
Australia	57	54	51	43	53
Korea	86	61	39	23	60
New Zealand	64	64	55	47	59
Austria	81	73	66	50	69
Belgium	70	58	47	31	53
Denmark	69	65	61	47	62
Finland	83	74	59	37	65
France	86	74	62	42	68
Germany	89	88	84	72	84
Greece	64	50	34	21	43
Ireland	64	51	36	27	47
Italy	*49*	*43*	*28*	*15*	*35*
Luxembourg	32	33	28	20	29
Netherlands	70	65	56	46	61
Portugal	31	24	16	9	20
Spain	47	32	18	10	28
Sweden	88	81	69	52	75
United Kingdom	86	80	72	59	76
Czech Republic	91	86	83	70	83
Norway	88	86	79	65	81
Poland	88	82	68	47	74
Switzerland	88	85	79	73	82
Turkey	26	23	20	14	23
Country mean	71	63	53	41	60

Source: OECD (1997) Education at a Glance.

Tables A.1.4. /A..1.6. Percentage of the population who have completed tertiary education, by age groups (1995).

Countries	Age 25-34 (a)	Age 35-44 (b)	Age 45-54 (c)	Age 55-64 (d)
Canada	53	49	46	33
United States	34	m	m	m
Australia	25	28	24	17
Korea	29	16	11	7
New Zealand	24	28	26	21
Austria	9	11	7	4
Belgium	33	27	22	13
Denmark	20	25	21	14
Finland	23	23	20	14
France	25	20	17	9
Germany	21	27	24	18
Greece	26	21	14	8
Ireland	27	21	16	11
Italy	*8*	*11*	*8*	*4*
Luxembourg	11	14	12	6
Netherlands	25	25	21	14
Portugal	14	14	10	6
Spain	27	18	11	6
Sweden	29	32	29	20
United Kingdom	23	24	21	16
Czech Republic	12	11	11	8
Norway	32	33	27	18
Poland	15	13	14	9
Switzerland	22	23	21	17
Turkey	8	9	10	6
Country Mean	23	22	18	12

Source: OECD (1997) Education at a Glance.

Table A.1.7. Log of the odds ratios of completion of upper secondary school in the European countries by age groups.

	25-34 (a)	35-44 (b)	45-54 (c)	55-64 (d)	ln(a)-ln (d)
Austria	1,45001	0,994623	0,663294	0	1,45001
Belgium	0,847298	0,322773	-0,12014	-0,80012	1,647417
Denmark	0,800119	0,619039	0,447312	-0,12014	0,920264
Finland	1,585627	1,045969	0,363965	-0,53222	2,117844
France	1,81529	1,045969	0,489548	-0,32277	2,138063
Germany	2,090741	1,99243	1,658228	0,944462	1,146279
Greece	0,575364	0	-0,66329	-1,32493	1,90029
Ireland	0,575364	0,040005	-0,57536	-0,99462	1,569987
Italy	*-0,04001*	*-0,28185*	*-0,94446*	*-1,7346*	*1,694596*
Luxembourg	-0,75377	-0,70819	-0,94446	-1,38629	0,632523
Netherlands	0,847298	0,619039	0,241162	-0,16034	1,007641
Portugal	-0,80012	-1,15268	-1,65823	-2,31363	1,513516
Spain	-0,12014	-0,75377	-1,51635	-2,19722	2,07708
Sweden	1,99243	1,45001	0,800119	0,080043	1,912387
UK	1,81529	1,386294	0,944462	0,363965	1,451325

Table A.1.8. Log of the odds ratios of completion of university in the European countries by age groups.

	25-34 (a)	35-44 (b)	45-54 (c)	55-64 (d)	ln(a)-ln (d)
Austria	-2,31363	-2,09074	-2,58669	-3,17805	0,864419
Belgium	-0,70819	-0,99462	-1,26567	-1,90096	1,192774
Denmark	-1,38629	-1,09861	-1,32493	-1,81529	0,428996
Finland	-1,20831	-1,20831	-1,38629	-1,81529	0,606979
France	-1,09861	-1,38629	-1,58563	-2,31363	1,215023
Germany	-1,32493	-0,99462	-1,15268	-1,51635	0,191422
Greece	-1,04597	-1,32493	-1,81529	-2,44235	1,396378
Ireland	-0,99462	-1,32493	-1,65823	-2,09074	1,096119
Italy	*-2,44235*	*-2,09074*	*-2,44235*	*-3,17805*	*0,735707*
Luxembourg	-2,09074	-1,81529	-1,99243	-2,75154	0,660794
Netherlands	-1,09861	-1,09861	-1,32493	-1,81529	0,716678
Portugal	-1,81529	-1,81529	-2,19722	-2,75154	0,936245
Spain	-0,99462	-1,51635	-2,09074	-2,75154	1,756913
Sweden	-0,89538	-0,75377	-0,89538	-1,38629	0,49091
UK	-1,20831	-1,15268	-1,32493	-1,65823	0,449917

Table A.1.9. Percentage of women in the population aged 25 to 64 by the highest completed level of education (year 1994).

Countries	Primary and lower secondary education	Upper secondary education	Non-university tertiary education	University education
Canada	49	54	50	45
United States	49	53	55	46
Australia	60	34	47	47
New Zealand	57	38	66	43
Austria	61	44	59	36
Belgium	51	47	62	36
Denmark	55	44	57	47
Finland	49	52	54	42
France	57	47	56	43
Germany	69	49	35	36
Greece	52	51	44	44
Ireland	47	58	53	42
Italy	*52*	*49*	-	*44*
Netherlands	56	46	-	42
Portugal	52	49	74	49
Spain	52	47	36	50
Sweden	46	50	55	48
United Kingdom	61	46	58	37
Czech Republic	66	46	-	40
Norway	50	50	48	47
Switzerland	69	53	23	31
Turkey	43	35	-	31
Country Mean	*55*	*47*	*44*	*42*

Source: OECD (1996) Education at a Glance.

Table A.1.10. Percentage of women in the population aged 25-34 by the highest completed level of education in selected OECD countries (year 1994).

	Primary and lower secondary school	Upper secondary school	Non-university tertiary education	University education
Canada	45	51	51	51
United States	46	50	57	50
Greece	52	52	51	54
Ireland	44	58	51	50
Italy	*49*	*52*	-	*52*
Portugal	49	55	74	59
Spain	49	50	44	56
OECD Country Mean	50	49	47	48

Source: OECD (1996) Education at a Glance.

Table A.1.11. Percentage of upper secondary school students enrolled in general and vocational education. In parentheses percentage for women. Enrolment rates at typical ages (1995).

Countries	General education	Vocational and technical education
Mexico	83 (81)	17 (19)
Australia	35 (38)	65 (62)
Japan	72 (75)	28 (25)
Korea	57 (53)	43 (47)
New Zealand	62 (67)	38 (33)
Austria	23 (25)	77 (75)
Belgium	32 (35)	68 (65)
Denmark	46 (52)	54 (48)
Finland	48 (51)	52 (49)
France	47 (53)	53 (47)
Germany	23 (27)	77 (73)
Greece	71 (87)	29 (13)
Ireland	79 (79)	21 (21)
Italy	*28 (31)*	*72 (69)*
Luxembourg	36 (41)	64 (59)
Netherlands	30 (34)	70 (66)
Portugal	76 (79)	24 (21)
Spain	60 (61)	40 (39)
Sweden	44 (49)	53 (48)
United Kingdom	42 (38)	58 (62)
Czech Republic	16 (19)	84 (81)
Hungary	27 (33)	73 (67)
Iceland	64 (74)	36 (26)
Norway	45 (53)	55 (47)
Switzerland	31 (39)	69 (61)
Turkey	56 (61)	44 (39)
Country Mean	47	53

Source: OECD (1997) Education at a Glance.

Table A.1.12 Gross Domestic Product per Head in US $ - current Prices and Current PPPs*

	GERMANY	FRANCE	ITALY	UK	USA	CANADA	JAPAN
1970	3119	3533	2993	3223	4920	3564	2874
1971	3367	3875	3206	3458	5278	3849	3146
1972	3656	4199	3434	3736	5745	4208	3522
1973	4060	4669	3863	4229	6363	4760	3953
1974	4414	5182	4361	4527	6816	5318	4180
1975	4779	5595	4633	4939	7341	5874	4649
1976	5386	6194	5230	5381	8124	6554	5093
1977	5932	6836	5727	5878	8962	7170	5626
1978	6581	7527	6369	6551	10014	7987	6315
1979	7466	8406	7307	7322	11055	8947	7193
1980	8235	9281	8268	7875	11896	9815	8036
1981	9118	10248	9153	8572	13216	11090	9081
1982	9628	11049	9742	9240	13605	11250	9861
1983	10294	11576	10294	9986	14566	12009	10470
1984	11136	12211	11041	10683	16020	13236	11311
1985	11826	12811	11746	11413	16976	14218	12150
1986	12417	13374	12374	12171	17736	14891	12730
1987	13040	14057	13180	13136	18649	15812	13631
1988	13963	15135	14211	14282	19912	17012	14967
1989	14976	16327	15259	15182	21270	17859	16312
1990	15991	17347	16257	15847	22224	18304	17824
1991	17046	18247	17198	15637	22605	18447	19156
1992	18474	18992	18099	16698	23600	18650	20144
1993	18532	18676	17717	16951	24551	19310	20689
1994	19754	19272	18682	17680	25764	20314	21223
1995	20510	19908	19460	17862	26711	20992	21916
1996	21200	20533	19974	18636	27821	21529	23235

* The data have been converted to US dollars using purchasing power parities (PPPs) for GDP. PPPs are the rates of currency conversion that equalise the purchasing power of different countries by eliminating differences in price levels between countries.

Source: OECD (1998) Historical Statistics.

Table A.1..13 Employment rate in agriculture.

	GERMANY	FRANCE	ITALY	UK	JAPAN	USA	CANADA
1960	13.96%	22.48%	32.62%	4.73%	30.21%	8.49%	13.16%
1961	13.15%	21.64%	30.80%	4.59%	28.97%	8.09%	12.80%
1962	12.58%	20.72%	29.22%	4.41%	27.81%	7.55%	12.01%
1963	11.95%	19.63%	27.20%	4.37%	25.98%	7.11%	11.68%
1964	11.42%	18.59%	25.75%	4.14%	24.68%	6.68%	11.03%
1965	10.89%	17.77%	26.26%	3.84%	23.53%	6.30%	9.99%
1966	10.60%	16.98%	25.19%	3.67%	22.21%	5.63%	8.92%
1967	10.36%	16.29%	24.39%	3.59%	21.06%	5.29%	8.90%
1968	9.90%	15.57%	22.90%	3.49%	19.75%	5.15%	8.56%
1969	9.26%	14.48%	22.00%	3.35%	18.77%	4.75%	8.12%
1970	8.64%	13.53%	20.18%	3.23%	17.39%	4.53%	7.63%
1971	8.10%	12.78%	20.21%	3.16%	15.89%	4.42%	7.49%
1972	7.72%	12.00%	19.04%	3.04%	14.73%	4.38%	6.89%
1973	7.30%	11.24%	18.32%	2.98%	13.41%	4.20%	6.54%
1974	7.01%	10.65%	17.54%	2.82%	12.89%	4.16%	6.35%
1975	6.84%	10.33%	16.73%	2.78%	12.66%	4.09%	6.07%
1976	6.36%	9.91%	16.46%	2.79%	12.20%	3.89%	5.86%
1977	6.02%	9.50%	15.82%	2.79%	11.87%	3.72%	5.66%
1978	5.81%	9.19%	15.45%	2.75%	11.70%	3.70%	5.66%
1979	5.40%	8.96%	14.90%	2.66%	11.19%	3.55%	5.59%
1980	5.29%	8.69%	14.27%	2.62%	10.42%	3.55%	5.39%
1981	5.16%	8.45%	13.42%	2.66%	9.98%	3.51%	5.37%
1982	5.04%	8.15%	12.43%	2.68%	9.72%	3.59%	5.22%
1983	4.96%	7.92%	12.41%	2.67%	9.26%	3.51%	5.44%
1984	4.79%	7.75%	11.88%	2.58%	8.88%	3.30%	5.29%
1985	4.59%	7.56%	11.20%	2.35%	8.77%	3.12%	4.97%
1986	4.45%	7.32%	10.88%	2.22%	8.46%	3.06%	4.82%
1987	4.22%	7.04%	10.54%	2.30%	8.27%	3.02%	4.71%
1988	4.01%	6.72%	9.86%	2.34%	7.89%	2.89%	4.44%
1989	3.76%	6.38%	9.34%	2.23%	7.56%	2.88%	4.23%
1990	3.54%	5.71%	8.93%	2.15%	7.22%	2.86%	4.18%
1991	4.24%	5.48%	8.51%	2.28%	6.70%	2.91%	4.43%
1992	3.79%	5.32%	8.22%	2.21%	6.39%	2.89%	4.23%
1993	3.50%	5.14%	7.97%	2.04%	5.94%	2.74%	4.29%
1994	3.34%	4.93%	7.75%	2.09%	5.78%	2.91%	4.10%
1995	3.34%	4.74%	7.47%	2.07%	5.68%	2.88%	4.10%
1996	3.34%	4.57%	6.99%	1.96%	5.49%	2.82%	4.13%

Source: OECD (1998) Historical Statistics.

Table A.1.14. Employment rate in industry.

	GERMANY	FRANCE	ITALY	UK	JAPAN	USA	CANADA
1960	46.97%	37.64%	33.87%	47.68%	28.52%	35.27%	32.73%
1961	47.60%	38.03%	35.05%	47.56%	29.92%	34.34%	32.24%
1962	47.83%	38.36%	36.22%	46.95%	31.19%	34.81%	32.51%
1963	47.89%	38.80%	37.58%	46.40%	31.69%	35.09%	32.57%
1964	47.97%	39.20%	37.60%	46.49%	32.05%	35.05%	33.06%
1965	48.42%	39.10%	36.96%	46.56%	32.41%	35.46%	33.20%
1966	48.09%	39.14%	36.99%	46.36%	32.73%	36.05%	33.66%
1967	46.87%	38.89%	37.29%	45.65%	33.82%	35.84%	32.38%
1968	47.13%	38.62%	37.79%	45.23%	34.57%	35.43%	31.77%
1969	48.11%	38.98%	38.95%	45.23%	35.06%	35.34%	31.73%
1970	49.33%	39.23%	39.50%	44.74%	35.71%	34.35%	30.93%
1971	48.38%	39.29%	39.72%	43.59%	36.02%	32.88%	30.48%
1972	47.71%	39.34%	39.62%	42.66%	36.29%	32.58%	30.35%
1973	47.47%	39.50%	39.22%	42.30%	37.21%	33.18%	30.65%
1974	46.66%	39.41%	39.26%	42.04%	37.01%	32.48%	30.51%
1975	45.36%	38.61%	39.18%	40.40%	35.86%	30.62%	29.30%
1976	44.93%	37.99%	38.37%	39.57%	35.82%	30.82%	29.65%
1977	44.63%	37.53%	38.49%	39.42%	35.36%	30.86%	28.76%
1978	44.32%	36.83%	38.15%	39.09%	35.00%	31.12%	28.67%
1979	44.16%	36.26%	37.81%	38.65%	34.93%	31.29%	28.84%
1980	43.70%	35.93%	37.90%	37.64%	35.33%	30.53%	28.53%
1981	42.96%	35.18%	37.56%	35.78%	35.30%	30.07%	28.29%
1982	42.11%	34.56%	37.08%	34.57%	34.85%	28.39%	26.53%
1983	41.42%	33.78%	36.13%	33.34%	34.76%	28.02%	25.57%
1984	41.15%	32.90%	34.49%	35.18%	34.82%	28.47%	25.87%
1985	40.99%	32.01%	33.63%	34.82%	34.87%	28.04%	25.49%
1986	40.75%	31.37%	33.09%	34.32%	34.48%	27.68%	25.31%
1987	40.35%	30.78%	32.62%	32.91%	33.78%	27.10%	25.30%
1988	39.94%	30.26%	32.42%	33.04%	34.14%	26.93%	25.77%
1989	39.81%	30.07%	32.41%	32.91%	34.25%	26.67%	25.79%
1990	39.77%	29.60%	32.26%	32.54%	34.07%	26.20%	24.76%
1991	40.79%	29.20%	32.30%	31.46%	34.43%	25.27%	23.30%
1992	39.50%	28.40%	32.20%	30.03%	34.60%	24.61%	22.69%
1993	38.62%	27.40%	32.49%	29.44%	34.28%	24.04%	22.20%
1994	37.54%	26.70%	32.15%	27.71%	34.03%	24.00%	22.57%
1995	37.52%	26.40%	32.26%	27.39%	33.56%	24.01%	22.95%
1996	37.54%		32.10%	27.41%	33.27%	23.85%	22.79%

Source: OECD (1998) Historical Statistics.

Table A.1.15. Employment rate in services.

	GERMANY	FRANCE	ITALY	UK	JAPAN	USA	CANADA
1960	39.07%	39.88%	33.51%	47.59%	41.28%	56.24%	54.11%
1961	39.25%	40.33%	34.15%	47.85%	41.11%	57.57%	54.96%
1962	39.60%	40.92%	34.56%	48.64%	41.00%	57.64%	55.48%
1963	40.16%	41.57%	35.22%	49.23%	42.33%	57.81%	55.75%
1964	40.61%	42.21%	36.65%	49.38%	43.27%	58.27%	55.91%
1965	40.69%	43.13%	36.77%	49.60%	44.06%	58.24%	56.81%
1966	41.31%	43.88%	37.82%	49.98%	45.06%	58.32%	57.42%
1967	42.77%	44.81%	38.32%	50.76%	45.12%	58.87%	58.72%
1968	42.97%	45.81%	39.31%	51.28%	45.68%	59.43%	59.67%
1969	42.63%	46.54%	39.05%	51.42%	46.17%	59.91%	60.15%
1970	42.03%	47.24%	40.32%	52.03%	46.90%	61.11%	61.45%
1971	43.52%	47.93%	40.07%	53.25%	48.09%	62.70%	62.03%
1972	44.57%	48.66%	41.34%	54.30%	48.99%	63.04%	62.76%
1973	45.22%	49.26%	42.46%	54.72%	49.34%	62.62%	62.81%
1974	46.32%	49.93%	43.20%	55.14%	50.09%	63.35%	63.15%
1975	47.80%	51.06%	44.09%	56.83%	51.50%	65.29%	64.64%
1976	48.72%	52.10%	45.17%	57.61%	52.00%	65.29%	64.47%
1977	49.35%	52.96%	45.70%	57.79%	52.79%	65.41%	65.58%
1978	49.87%	53.98%	46.40%	58.16%	53.29%	65.19%	65.67%
1979	50.44%	54.79%	47.29%	58.69%	53.91%	65.16%	65.55%
1980	51.02%	55.39%	47.83%	59.74%	54.23%	65.92%	66.07%
1981	51.89%	56.37%	49.03%	61.55%	54.72%	66.42%	66.34%
1982	52.85%	57.28%	50.49%	62.75%	55.45%	68.02%	68.26%
1983	53.63%	58.30%	51.46%	63.99%	55.96%	68.47%	69.00%
1984	54.06%	59.35%	53.62%	62.02%	56.30%	68.23%	68.84%
1985	54.43%	60.43%	55.17%	63.00%	56.36%	68.84%	69.54%
1986	54.80%	61.32%	56.03%	64.04%	57.08%	69.26%	69.86%
1987	55.43%	62.19%	56.84%	64.79%	57.94%	69.87%	70.00%
1988	56.05%	63.02%	57.72%	65.05%	57.96%	70.17%	69.78%
1989	56.43%	63.55%	58.24%	65.51%	58.21%	70.45%	69.99%
1990	56.69%	64.60%	58.80%	65.99%	58.70%	70.94%	71.07%
1991	54.97%	65.30%	59.19%	67.39%	58.83%	71.81%	72.27%
1992	56.71%	66.20%	59.57%	67.77%	59.01%	72.49%	73.08%
1993	57.88%	67.40%	59.57%	68.52%	59.75%	73.22%	73.51%
1994	59.12%	68.40%	60.23%	70.20%	60.17%	73.09%	73.33%
1995	59.14%	68.90%	60.28%	70.54%	60.74%	73.12%	72.95%
1996	59.12%		60.92%	71.04%	61.22%	73.34%	73.08%

Source: OECD (1998) Historical Statistics.

Table A.1.16. Unemployment rate.

	Germany	France	Italy	UK	Japan	USA	Canada
1960	1.0%		4.2%	1.5%	1.6%	5.5%	6.7%
1961	0.6%		3.8%	1.4%	1.4%	6.7%	7.2%
1962	0.6%		3.3%	1.9%	1.3%	5.6%	6.0%
1963	0.7%		2.8%	2.1%	1.3%	5.6%	5.6%
1964	0.6%		3.2%	1.5%	1.2%	5.2%	4.4%
1965	0.5%	1.5%	4.0%	1.3%	1.2%	4.5%	3.9%
1966	0.6%	1.6%	4.3%	1.4%	1.3%	3.8%	3.4%
1967	1.8%	2.1%	4.0%	2.2%	1.3%	3.8%	3.9%
1968	1.2%	2.7%	4.2%	2.3%	1.2%	3.6%	4.5%
1969	0.7%	2.3%	4.2%	2.2%	1.1%	3.5%	4.4%
1970	0.6%	2.5%	4.0%	2.4%	1.2%	5.0%	5.7%
1971	0.7%	2.7%	4.0%	2.9%	1.2%	6.0%	6.2%
1972	0.9%	2.8%	4.7%	3.1%	1.5%	5.6%	6.2%
1973	1.0%	2.7%	4.7%	2.1%	1.2%	4.9%	5.6%
1974	2.1%	2.9%	3.9%	2.2%	1.4%	5.6%	5.4%
1975	4.0%	4.0%	4.3%	3.6%	1.9%	8.5%	7.0%
1976	3.9%	4.4%	4.9%	4.8%	2.0%	7.7%	7.2%
1977	3.8%	4.9%	5.3%	5.2%	2.0%	7.0%	8.1%
1978	3.7%	5.2%	5.3%	4.5%	2.2%	6.1%	8.4%
1979	3.2%	5.8%	5.7%	4.0%	2.1%	5.8%	7.5%
1980	3.2%	6.2%	5.6%	5.3%	2.0%	7.2%	7.5%
1981	4.5%	7.4%	6.3%	8.3%	2.2%	7.6%	7.6%
1982	6.4%	8.0%	6.9%	9.7%	2.3%	9.7%	11.0%
1983	7.9%	8.3%	7.7%	10.5%	2.7%	9.6%	11.9%
1984	7.9%	9.7%	8.5%	10.7%	2.7%	7.5%	11.3%
1985	8.0%	10.2%	8.6%	11.0%	2.6%	7.2%	10.5%
1986	7.7%	10.4%	9.9%	11.0%	2.8%	7.0%	9.6%
1987	7.6%	10.5%	10.2%	9.8%	2.8%	6.2%	8.8%
1988	7.6%	10.0%	10.5%	7.8%	2.5%	5.5%	7.8%
1989	6.9%	9.3%	10.2%	6.0%	2.3%	5.3%	7.5%
1990	6.2%	8.9%	9.1%	5.8%	2.1%	5.6%	8.1%
1991	6.7%	9.4%	8.6%	8.2%	2.1%	6.8%	10.4%
1992	7.7%	10.4%	8.8%	9.9%	2.1%	7.5%	11.3%
1993	8.9%	11.7%	10.2%	10.2%	2.5%	6.9%	11.2%
1994	9.6%	12.2%	11.3%	9.2%	2.9%	6.1%	10.4%
1995	9.4%	11.5%	12.0%	8.1%	3.1%	5.6%	9.5%
1996	10.3%	12.4%	12.1%	7.4%	3.3%	5.4%	9.7%
1997	11.1%	12.6%	12.1%	6.1%	3.2	5.0%	9.4%
1998	10.9%	12.2%	11.9%	5.6%	3.1	5.1%	9.1%

Source: OECD (1997/2) Statistical Compendium on CD-Rom.

Table A.1.17 Female unemployment rates.

	Germany	France	Italy	UK	Japan	USA	Canada
1960	0.9%	2.3%	7.3%	1.1%	1.7%	5.9%	
1961	0.6%	2.0%	7.1%	1.0%	1.6%	7.2%	
1962	0.5%	2.3%	6.7%	1.3%	1.5%	6.2%	
1963	0.6%	2.5%	5.6%	1.5%	1.3%	6.5%	
1964	0.5%	2.0%	6.7%	1.0%	1.3%	6.2%	
1965	0.4%	2.5%	7.9%	0.8%	1.3%	5.5%	
1966	0.5%	2.5%	8.7%	0.7%	1.4%	4.8%	3.4%
1967	1.3%	3.4%	8.5%	1.1%	1.4%	5.2%	3.7%
1968	0.9%	4.3%	9.3%	1.0%	1.1%	4.8%	4.3%
1969	0.6%	3.9%	9.7%	0.9%	1.1%	4.7%	4.7%
1970	0.6%	4.3%	9.4%	0.9%	1.0%	5.9%	5.8%
1971	0.9%	4.6%	9.3%	1.0%	1.1%	6.9%	6.6%
1972	1.1%	4.7%	10.7%	1.2%	1.3%	6.6%	7.0%
1973	1.2%	4.6%	11.4%	0.9%	1.2%	6.0%	6.7%
1974	2.5%	4.8%	9.4%	0.8%	1.3%	6.7%	6.4%
1975	4.4%	6.1%	10.5%	1.4%	1.7%	9.3%	8.1%
1976	4.8%	6.8%	12.0%	2.8%	1.7%	8.6%	8.4%
1977	4.9%	7.5%	12.4%	3.4%	1.8%	8.2%	9.4%
1978	4.8%	7.6%	12.4%	3.5%	2.0%	7.2%	9.6%
1979	4.3%	8.5%	13.1%	3.3%	2.0%	6.8%	8.7%
1980	4.3%	9.4%	13.0%	4.2%	2.0%	7.4%	8.4%
1981	5.6%	10.6%	13.4%	6.0%	2.1%	7.9%	8.3%
1982	7.3%	11.2%	13.9%	7.0%	2.3%	9.4%	10.8%
1983	8.8%	11.2%	15.3%	8.0%	2.6%	9.2%	11.5%
1984	8.8%	12.6%	16.3%	8.3%	2.8%	7.6%	11.3%
1985	9.0%	12.9%	16.6%	8.7%	2.7%	7.4%	10.6%
1986	9.0%	13.1%	17.6%	8.9%	2.8%	7.0%	9.8%
1987	8.8%	13.6%	18.5%	7.6%	2.8%	6.2%	9.3%
1988	8.8%	13.1%	18.6%	6.0%	2.6%	5.5%	8.3%
1989	8.1%	12.6%	18.6%	4.0%	2.3%	5.3%	7.8%
1990	7.4%	11.7%	17.4%	3.3%	2.2%	5.5%	8.1%
1991	7.0%	12.0%	16.7%	4.4%	2.2%	6.4%	9.7%
1992	8.4%	12.8%	17.2%	7.3%	2.2%	7.0%	10.4%
1993	9.6%	13.7%	15.4%	7.6%	2.6%	6.6%	10.6%
1994	9.9%	14.3%	16.0%	7.3%	3.0%	6.0%	9.8%
1995	9.7%	13.8%	16.9%	6.8%	3.2%	5.6%	9.2%
1996	10.2%	14.5%	16.7%	6.3%	3.3%	5.4%	9.4%

Source: OECD (1997/2) Statistical Compendium on CD-Rom.

Table A.1.18. Youth Unemployment rates (< 25).

	Germany	France	Italy	UK	Japan	USA	Canada
1965	11.8%		32.5%		24.6%	42.5%	38.7%
1966	12.4%		32.0%		18.5%	44.6%	42.6%
1967	12.6%		33.4%		30.2%	45.4%	44.1%
1968	11.5%		33.3%		35.6%	49.1%	45.5%
1969	14.0%		34.0%		35.1%	49.9%	45.6%
1970	18.4%		33.6%	27.3%	37.3%	48.2%	45.0%
1971	19.7%		32.8%	31.0%	37.5%	47.7%	46.1%
1972	20.1%		35.0%	29.4%	34.3%	50.0%	45.7%
1973	23.3%		32.2%	24.9%	33.8%	51.4%	46.2%
1974	28.4%	40.5%	32.8%	28.6%	30.1%	51.1%	47.3%
1975	28.6%		60.8%	36.2%	25.0%	45.8%	47.2%
1976	28.6%		59.9%	43.8%	22.2%	46.4%	48.1%
1977	29.4%		60.0%	45.6%	23.6%	47.1%	48.0%
1978	28.4%		61.3%	44.9%	21.8%	49.4%	46.4%
1979	26.2%		60.8%	44.4%	20.5%	48.8%	46.7%
1980	27.2%		62.3%	46.6%	21.9%	45.9%	47.0%
1981	29.9%		61.3%	41.0%	22.2%	45.2%	45.8%
1982	30.4%		61.9%	40.6%	22.1%	40.9%	42.7%
1983	29.2%		60.7%	39.6%	21.1%	38.8%	40.5%
1984	27.0%		60.3%	38.8%	22.4%	39.1%	37.5%
1985	26.0%	38.5%	59.8%	38.8%	22.4%	38.6%	35.9%
1986	24.5%	35.6%	56.5%	36.5%	23.4%	37.7%	35.3%
1987	22.6%	31.9%	54.3%	33.6%	23.1%	37.7%	33.3%
1988	19.7%	29.65	52.3%	31.8%	24.5%	37.1%	31.8%
1989	17.0%	27.2%	49.5%	29.9%	25.4%	37.0%	29.8%
1990	12.4%	25.3%	49.7%	31.5%	26.9%	35.6%	29.7%
1991	15.2%	24.3%	48.7%	33.1%	28.7%	34.0%	28.6%
1992	13.8%	23.4%	47.2%	30.8%	27.5%	32.0%	27.8%
1993	13.3%	23.1%	42.8%	30.3%	27.7%	32.2%	26.8%
1994	13.2%	22.3%	39.0%	30.1%	25.5%	33.7%	26.6%
1995	13.2%	20.6%	38.5%	30.1%	25.8%	35.0%	26.9%
1996	11.9%		37.4%	31.2%	25.6%	35.2%	26.6%

Source: OECD (1997/2) Statistical Compendium on CD-Rom.

Tables A.4.1./A.4.2. Percentages of individuals who attended and completed the different cycles of education. conditioned on having completed the preceding one. by cohort and broken down by sex.

	Cohort 30-39	Cohort 30-39		Cohort 60-65	Cohort 60-65	
Elementary school certificate	T 86.0	M 52.1	F 47.9	T 98.8	M 51.2	F 48.8
Lower sec. school attendance Avviamento Media	T 48.6 18.4 81.6	M 57.9 53.9 58.8	F 42.1 46.1 41.2	T 94.7 - -	M 51.4 - -	F 48.6 - -
Lower sec. school certificate	T 89.5	M 59.0	F 41.0	T 97.9	M 50.9	F 49.1
Upper sec. school attendance	T 56.8	M 62.0	F 38.0	T 75.7	M 50.3	F 49.7
Upper sec.school certificate	T 77.9	M 59.9	F 40.1	T 79.4	M 46.9	F 53.1
University attendance	T 40.7	M 68.2	F 31.8	T 48.5	M 48.4	F 51.6

Total number of cases: 978 for cohort 30-39; 827 for cohort 60-65.

Table A.4.3. Attendance rates in different kinds of high school. by cohorts.

Upper secondary schools	Cohort 30-39			Cohort 60-65		
	Total	Men	Women	Total	Men	Women
Istituti Professionali	5.8	8.8	1.4	11.2	13.0	9.4
Istituti Tecnici	8.7	12.5	3.3	20.6	25.6	15.3
Licei	20.5	23.6	16.0	18.3	16.6	20.2
Altri Istituti Superiori	20.2	13.4	30.0	21.5	17.1	26.1
Drop-outs	44.8	41.7	49.3	28.4	27.7	29.0

Total number of cases in cohort 30-39: 366 (male: 216; female:150).
Total number of cases in cohort 60-65: 758 (male: 386; female:372).

Table A.4.4. Percentages of individuals who attended and completed the different cycles of education. conditioned on having completed the preceding one. by cohort and farm origin.

	Cohort 30-39		Cohort 60-65	
Total of whom having	Farm 34.3	Non Farm 65.7	Farm 12.5	Non Farm 87.5
Elementary school certificate	75.5	91.4	98.1	98.9
Lower sec. school attendance	28.1	57.5	87.1	95.8
Lower sec. school certificate	83.1	90.8	97.7	98.0
Upper sec. school attendance	47.5	58.6	43.0	79.9
Upper sec. school certificate	71.4	78.9	78.4	79.5
University attendance	40.0	40.8	48.3	48.5

Total number of cases: 978 for cohort 30-39; 827 for cohort 60-65.

Table A.5.1. Individual income (net income) by level of education.

Educational qualifications	Millions lire
No educational certification	12.711
Elementary qualification	18.503
Lower secondary school qualification	23.163
Upper secondary school diploma	29.842
University degree	47.879

Source: Bank of Italy (1997) *Supplemento al Bollettino Statistico n.14-20/3/97.*

Table A.5.2. Unemployment rate by age groups and educational qualifications.

Educational qualifications	25-34	35-64	24-64
No compulsory education	25.8	8.0	9.5
Lower secondary qualification	13.7	6.3	9.4
Vocational qualification	11.5	4.9	7.9
Upper secondary qualification	14.5	3.5	8.3
University degree	21.1	2.0	7.5

Source: ISTAT data (1997) from Checchi. D. (1999) *Istruzione e Mercato* (p.27).

Table A.5.3. Educational attainment rates of individuals in the subsample (cohort 1930-59). by gender (absolute numbers are in parentheses).

Educational levels	Women	Men	Total
No qualification and primary qualification	44.4 (465)	43.1 (630)	43.5 (1095)
Compulsory schooling qualification	20.4 (214)	24.8 (362)	23.0 (576)
Upper-secondary school qualification	28.3 (297)	25.4 (372)	26.7 (669)
University degree	7.0 (73)	6.7 (98)	6.8 (171)
Total	100 (1049)	100 (1462)	100 (2511)

Table A.5.4. Educational attainment rates of individuals in the subsample. by cohort (absolute numbers are in parentheses).

Educational levels	Cohort 30-39	Cohort 40-49	Cohort 50-59
No qualification and primary qualification	64.1 (504)	44.5 (386)	23.9 (205)
Compulsory schooling qualification	17.6 (139)	22.4 (194)	28.4 (243)
Upper-secondary school qualification	14.4 (113)	25.9 (225)	38.6 (331)
University degree	3.9 (31)	7.2 (62)	9.1 (78)
Total	100 (787)	100 (867)	100 (857)

Table A.5.5. Percentages of individuals in the subsample gaining different types of upper-secondary school certificate. by gender (absolute numbers are in parentheses).

Upper-secondary schools	Women	Men	Total
2. 3 and 4 years training	57.2 (170)	22.6 (84)	38.0 (254)
Vocational schools	11.4 (34)	19.1 (71)	15.7 (105)
Technical schools	16.6 (49)	40.0 (149)	29.6 (198)
Academic schools	8.4 (25)	16.7 (62)	13.0 (87)
Other 5 years schools	6.4 (19)	1.6 (6)	3.7 (25)
Total	100 (297)	100 (372)	100 (669)

Table A.5.6. Percentages of individuals in the subsample gaining different types of upper-secondary school certificate. by cohort (absolute numbers are in parentheses).

Upper-secondary schools	Cohort 30-39	Cohort 40-49	Cohort 50-59
2. 3 and 4 years training	42.5 (48)	39.5 (89)	35.3 (117)
Vocational schools	13.2 (15)	12.9 (29)	18.4 (61)
Technical schools	28.4 (32)	29.4 (66)	30.3 (100)
Academic schools	12.4 (14)	14.2 (32)	12.4 (41)
Other 5 years schools	3.5 (4)	4.0 (9)	3.6 (12)
Total	100 (113)	100 (225)	100 (331)

Tables A.5.7./ A.5.8. OLS regression coefficients (educational categories contrasted with no qualification) of first job scores (standard error is in parentheses). by gender.

Different educational qualifications	ALL COHORTS (30-39. 40-49. 50-59)					
	WOMEN		MEN		POOLED	
	Model 1	Model 2[a]	Model 1	Model 2[a]	Model 1	Model 2[a]
Constant (no or primary qualification)	13.824*** (0.796)	9.209*** (1.620)	15.797*** (0.693)	11.371*** (1.246)	17.050*** (0.731)	10.592*** (1.019)
Lower secondary school certificate	6.582*** (1.438)	5.488** (1.616)	5.755*** (1.151)	5.270*** (1.230)	7.656*** (0.913)	5.360*** (0.980)
Istituti Magistrali and others	25.063*** (1.562)	22.023*** (1.789)	18.655*** (2.030)	16.959*** (2.156)	24.294*** (1.240)	19.758*** (1.333)
Istituti Professionali	38.969*** (3.109)	36.451*** (3.300)	24.864*** (2.188)	23.173*** (2.298)	32.044*** (1.803)	27.566*** (1.892)
Istituti Tecnici	35.032*** (2.627)	32.536*** (2.839)	35.115*** (1.591)	31.296*** (1.747)	37.456*** (1.373)	31.883*** (1.485)
Licei	39.495*** (3.594)	33.370*** (3.989)	33.751*** (2.326)	27.402*** (2.531)	37.539*** (1.953)	29.326*** (2.139)
University certificate	57.641*** (2.103)	51.127*** (2.519)	57.468*** (1.897)	48.246*** (2.182)	59.319*** (1.446)	49.415*** (1.649)
Father's education		0.843** (0.255)		0.470* (0.196)		0.613** (0.155)
Father's occupation		0.133*** (0.033)		0.236*** (0.027)		0.196*** (0.020)
Female					-0.192 (0.718)	-0.472 (0.757)
Cohort 40-49		-1.575 (1.478)		-2.602* (1.168)	-2.007* (0.867)	-2.075* (0.917)
Cohort 50-59		-5.643*** (1.534)		-6.391*** (1.224)	-6.658*** (0.908)	-5.890*** (0.957)
R square (adj.)	0.500	0.537	0.490	0.554	0.503	0.544

* significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Total number of cases: 1049 (906 in model 2) women and 1462 (1274 in model 2) men.
[a] Model 2 controls for social origin and cohort.

Tables A.5.9./A.5.10. OLS regression coefficients (educational categories contrasted with no qualification) of first job scores (standard error is in parentheses). by cohort.

Different educational qualifications	COHORT 30-39		COHORT 40-49		Cohort 50-59	
	Model 1	Model 2[a]	Model 1	Model 2[a]	Model 1	Model 2[a]
Constant (no or primary qualification)	15.106*** (0.748)	7.991*** (1.538)	15.230*** (0.852)	9.463*** (1.516)	14.046*** (1.210)	7.249** (1.809)
Lower secondary school certificate	13.972*** (1.615)	11.390*** (1.735)	5.816** (1.485)	3.745* (1.618)	2.595 (1.665)	0.831 (1.761)
Istituti Magistrali and others	29.602*** (2.548)	21.297*** (2.818)	24.387*** (1.987)	20.992*** (2.115)	18.714*** (2.044)	15.462*** (2.217)
Istituti Professionali	45.560*** (4.421)	37.032*** (4.688)	33.390*** (3.259)	31.084*** (3.467)	24.675*** (2.583)	20.840*** (2.695)
Istituti Tecnici	43.143*** (3.076)	31.980*** (3.525)	37.557*** (2.252)	34.606*** (2.411)	32.273*** (2.154)	27.481*** (2.316)
Licei	34.893*** (4.572)	29.970*** (4.866)	41.582*** (3.113)	34.745*** (3.339)	31.978*** (3.036)	22.398*** (3.485)
University certificate	59.022*** (3.122)	44.621*** (3.488)	57.366*** (2.314)	49.040*** (2.703)	57.723*** (2.353)	49.181*** (2.635)
Father's education		0.406 (0.272)		0.484 (0.258)		0.905** (0.26)
Father's occupation		0.314*** (0.038)		0.172*** (0.033)		0.137** (0.037)
Female		-2.107 (1.335)		0.065 (1.262)		0.307 (1.315)
R square (adj.)	0.480	0.538	0.535	0.576	0.502	0.534

*significant at 0.05 level; ** significant at 0.01 level; *** significant at 0.00 level
Total number of cases: 787 (655 in model 2) for cohort 30-39; 867 (753 in model 2) for cohort 40-49; 857 (772 in model 2) for cohort 50-59.
[a] Model 2 controls for social origin and gender.

Table A.6.1. Unemployment rates of the population aged between 25 and 64. by geographical area and level of education (year 1996).

	North-west	North-east	Centre	South and Islands	ITALY
Elementary education or less	5.3	4.0	5.7	17.4	9.5
Lower secondary school certification	5.4	4.0	7.7	17.5	9.4
Short vocational qualification	5.1	3.7	9.3	19.2	7.9
Upper secondary school diploma	4.0	3.8	7.5	15.3	8.3
University degree	5.1	5.9	6.9	10.8	7.5
Total	4.9	4.1	7.3	16.2	8.8

Source: ISTAT (1997) *Rapporto Annuale. La Situazione del Paese nel 1996.*

Note: ISTAT does not use Bagnasco's tripartition but this classification into 4 areas is not very different from that used. except for two regions. Emilia Romagna and Lazio are located by ISTAT respectively in North-east and Centre while. according to Bagnasco's classification. the first is in the Centre and the other in the South.

Table A.6.2. Educational attainment rates of population aged 10 and over. by geographical area (year 1997).

	Elementary education or less	Lower secondary school	Short secondary school	Upper secondary school	Short university courses	University
North-west	33.8	33.7	6.0	20.6	0.4	5.5
North-east and Centre	37.2	30.9	6.4	19.9	0.5	5.1
South and Islands	35.7	34.2	2.5	21.8	0.4	5.5
ITALY	35.6	33.1	4.5	20.9	0.4	5.4

Source: Estimations based on ISTAT (1997) *Forze di Lavoro* and ISTAT (1998) *Annuario statistico Italiano.*

Table A. 6.3. Rates of educational attainments. by cohort and geographical area.

Educational levels	Cohort 30-39			Cohort 40-49			Cohort 50-59			Cohort 60-65*			Cohort 30-59		
	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I	NW	NE/C	S/I
Elementary and no qualification	58.8	62.5	66.9	36.3	47.8	47.2	14.8	15.5	26.1	4.6	2.6	14	36.5	42	45.7
Compulsory schooling	22.6	17.7	18.9	29	23.5	22.3	27.8	30	26.2	30	32.4	36.9	26.5	23.7	22.6
Upper secondary school	16.2	14.1	10.6	26.1	23.4	20.8	47.2	42.2	36.4	65.4	62.4	48	29.9	26.6	23.3
University	2.4	5.7	3.6	8.6	5.3	9.7	10.2	12.3	11.3	0	2.6	1.1	7.1	7.7	8.4

*The low rates of university completion in this last birth-cohort are due to the young age of the respondents. Moreover. the percentages of people with a diploma from upper secondary school are higher than they should be because they also incorporates people who will gain a university degree afterwards. For this reason the last column reports the total rates of educational attainment. without including people born in the period 1960-65.

Table A.6.4. Attendance rates in different types of upper secondary school. by cohort and geographical area.

	Cohort 30-39			Cohort 60-65		
Shorter tracks	**NW**	**NE/C**	**S/I**	**NW**	**NE/C**	**S/I**
	24.5	16.7	17.7	28.4	19.9	18.2
Vocational schools	**NW**	**NE/C**	**S/I**	**NW**	**NE/C**	**S/I**
	11.3	4.6	2.7	14.7	13.3	7.4
Technical schools	**NW**	**NE/C**	**S/I**	**NW**	**NE/C**	**S/I**
	8.5	8.3	9.5	15.2	23.0	22.6
Academic schools	**NW**	**NE/C**	**S/I**	**NW**	**NE/C**	**S/I**
	13.2	24.1	23.2	17.1	16.4	20.4
Drop-outs	**NW**	**NE/C**	**S/I**	**NW**	**NE/C**	**S/I**
	42.5	46.3	46.9	24.6	27.4	31.4

APPENDIX 2

De Lillo and Schizzerotto's scale of occupational prestige (the original order was from the most to the least prestigious job but this order was reverted to make the results of the analyses more easy to read).

(1) Unskilled Manual Workers in the Service Sector
(2) Workers in Agriculture, Fishing and Hunting
(3) Street Traders II
(4) Employees in the Service Sector (Lowest Rank)
(5) Unskilled Manual Workers
(6) Workers in the Textile and Clothing Industries
(7) Unskilled Workers in the Paper and Packaging Industries
(8) Unskilled Workers in Chemical and Leather Goods Industries
(9) Unskilled Woodworkers
(10) Self-employed, Unskilled Manual Workers
(11) Workers in the Food Industry
(12) Junior Office Workers
(13) Employees in Shops and the Service Sector
(14) Salaried Drivers of Building and Agricultural Machinery, Crane Drivers and similar
(15) Workers in the Glass and Ceramics Industries and Similar
(16) Unskilled Workers in Metalworking and Metallurgical Industries
(17) Building Workers and similar
(18) Street Traders
(19) Salaried Drivers of Transport Vehicle and Persons in related Technical-Auxiliary Occupations
(20) Skilled Workers in Metalworking and Metallurgical Industries
(21) Skilled Workers in Chemical Industry
(22) Installers and Maintenance Workers
(23) Skilled Wood-Workers
(24) Skilled Workers in Paper Industry
(25) Self-employed Drivers of Ground and Sea Transports
(26) Proprietors of Agricultural, Fishing and Hunting Firms (0-3 employees)
(27) Crafts Workers in Metals, Glass, Ceramics and similar
(28) Proprietors of Metalworking Workshops (0-3 employees)
(29) Teachers of Technical-Manual Activities and Sports
(30) Proprietors of Woodworking Workshops (0-3 employees)
(31) Proprietors of Textiles and Clothing Workshops (0-3 employees)
(32) Soldiers and Lower Ranks in the State Armed Corps and similar
(33) Proprietors of Food Workshops (3 employees)
(34) Self-employed drivers of Building and Agriculture Machinery and similar
(35) Employees in Brokerage Agencies
(36) Proprietors of Chemical and Leather Goods Workshops (0-3 employees)
(37) Office-Workers
(38) Factory Foremen and similar
(39) Teachers in Nursery, Elementary Schools and similar

(40) Priests and Ministers
(41) Salaried Technicians in Radio, TV, Cinema and Entertainment
(42) Lower-ranked Officers and Non-Commissioned in the Army and the State Armed Corps
(43) Proprietors of Food Firms (4-14 employees)
(44) Proprietors of Installation and Maintenance Firms (0-3 employees)
(45) Supervisors in the Entertainment Industry
(46) Proprietors of Business and Services (0-3 employees)
(47) Proprietors of Building Firms (0-3 employees)
(48) Sportsmen
(49) Proprietors of Paper and Printing Workshops (0-3 employees)
(50) Proprietors of Paper and Printing Workshops (4-14 employees)
(51) Proprietors of Building Firms (4-14 employees)
(52) Paramedical Workers
(53) Junior Officers in the Army and the State Armed Cops
(54) Proprietors of Glass and Ceramics Workshops and similar (4-14 employees)
(55) Proprietors of Chemical and Leather Goods Workshops (4-14 employees)
(56) Proprietors of Textile and Clothing Workshops and similar (4-14 employees)
(57) Proprietors in Agriculture, Fishing and Hunting Firms (4-14 employees)
(58) Qualified Staff in the Tourist Industry and Services
(59) Self-employed Commercial Representatives and Agents in Business, Credit, Insurance, Transport and Services
(60) Middle-Level Technical Supervisors and Foremen
(61) Proprietors in Businesses and Services (4-14 employees)
(62) Proprietors of Installation and Maintenance Firms (4-14 employees)
(63) Proprietors of Metalworking Workshops (4-14 employees)
(64) Middle-Level Managers in Agriculture
(65) Proprietors of Wood-working Workshops (4-14 employees)
(66) Technical Office-Workers
(67) Proprietors of Firms dealing in Precious Metals and Stones (0-3 employees)
(68) Professionals in Occupations concerned with arts
(69) Self-employed Radio, TV, Cinema Technicians and similar
(70) Entrepreneurs and Managing Directors in Agriculture (15-49 employees)
(71) Secondary School Teachers
(72) Staff Employees
(73) Entertainers
(74) Supervisors Office-Workers
(75) Middle-Level Administrators in the Civil Services and the Public Corporations
(76) Proprietors of Firms dealing in Precious Metals and Stones (4-14 employees)
(77) Church Officials of Highest Rank
(78) Salaried Technical-Scientific Professionals
(79) Middle-Level Managers in Industry and Services
(80) Artistic-Creative Occupations
(81) Self-employed Building, Land and Industrial Surveyors, Art Valuers and similar
(82) Self-employed Technical-Scientific Professionals
(83) Salaried Professionals

(84) Air and Naval Commanders
(85) Journalists and related occupations
(86) Top Executives in Agriculture
(87) University Teachers and Senior Officials in the Civil Service and the Public Corporations
(88) Entrepreneurs and Managing Directors in Industry and Services (15-49 employees)
(89) Army Officers of Highest Rank
(90) Entrepreneurs and Managing Directors in Industry, Agriculture and Services (50 or more employees)
(91) Self-employed Professionals
(92) Top Executives in Industry and Services
(93) Judges and Top-Level Administrators of the Civil Service and the Public Corporations

Figure A3.1. The present Italian educational system

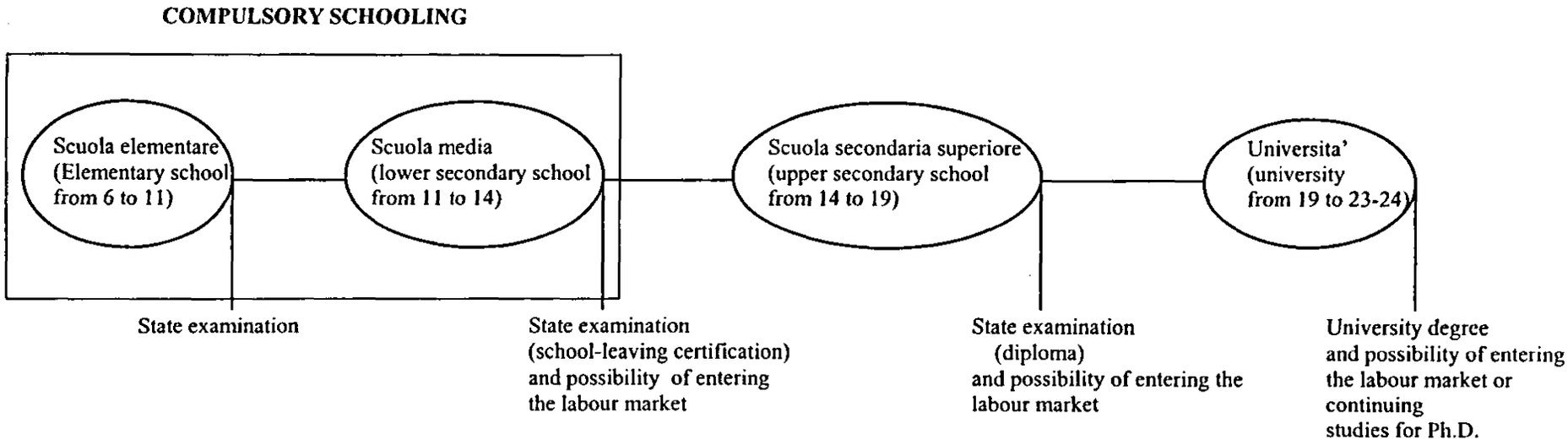
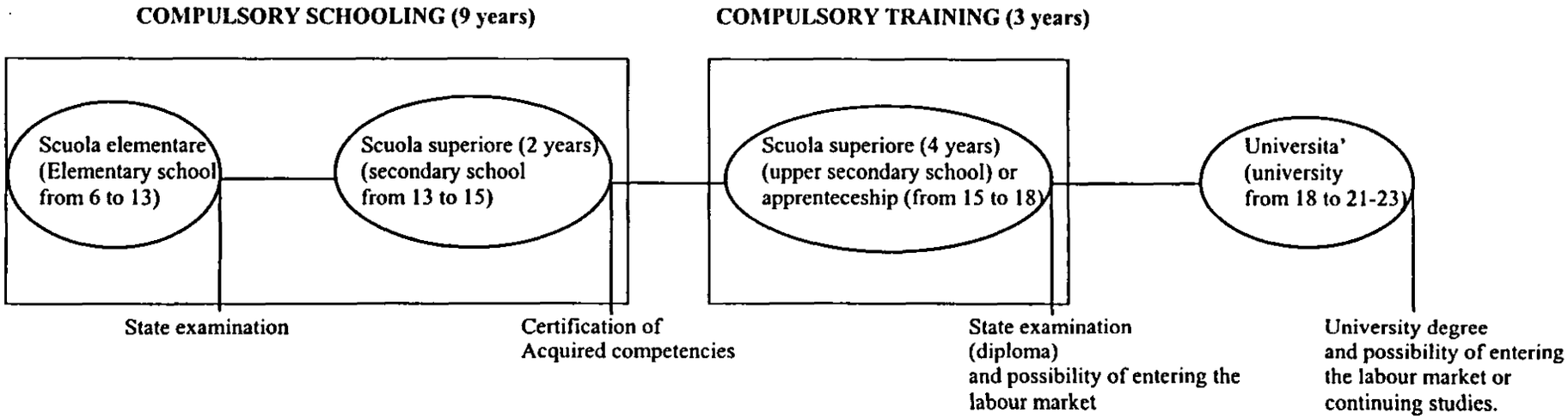


Figure A3.2. The structure of the Italian educational system after the reforms



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